The relationships among political process variables, socioeconomic variables, and public policy outputs in the American states: toward a more precise measure of inter-party competition.

Gerard S. Gryski

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THE RELATIONSHIPS AMONG POLITICAL PROCESS VARIABLES, SOCIOECONOMIC VARIABLES, AND PUBLIC POLICY OUTCOMES IN THE AMERICAN STATES: TOWARD A MORE PRECISE MEASURE OF INTER-PARTY COMPETITION

A Dissertation Presented
By
GERARD S. GRYSKI

Submitted to the Graduate School of the University of Massachusetts in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 1975

Political Science
THE RELATIONSHIPS AMONG POLITICAL PROCESS VARIABLES, SOCIOECONOMIC VARIABLES, AND PUBLIC POLICY OUTPUTS IN THE AMERICAN STATES: TOWARD A MORE PRECISE MEASURE OF INTER-PARTY COMPETITION

A Dissertation

By

GERARD S. GRYSKI

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December 1973
ABSTRACT

The Relationships Among Political Process Variables, Socioeconomic Variables, and Public Policy Outputs in the American States: Toward a More Precise Measure of Inter-Party Competition

December 1975

Gerard S. Gryski, B.B.A., City College of New York
M.A., University of Massachusetts, Amherst

Directed by: Dr. Philip B. Coulter

The stimulus for this dissertation was provided by V.O. Key in *Southern Politics* (New York: Knopf, 1949). In his study of politics and policy in the southern states, Key found that policy decisions were more redistributive in states whose political arrangements were more competitive.

In recent years advances in quantitative methodology and approaches to comparative inquiry have facilitated the testing of Key's original position. Basically the contemporary debate has been concerned with the question of which of socioeconomic and political variables is more useful in explaining interstate variations in expenditure patterns. Generally, the research has indicated that social variables are more powerful.

A major contention of this research is that the debate cannot be resolved as yet because political competition has not yet been measured adequately. Previous measures have relied on a distribution of seats measure of legislative competition. This study, for its measure, concentrates on competition within the context
of each individual legislative district. The theoretical rationale undergirding each measure is crucial: the conventional measures are supported by a responsible parties model of politics which does not reflect the realities of politics in the states; the new measure addresses itself to the more pluralistic pattern of politics in the American states.
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My dissertation and all the work that went into it is dedicated, with humility, to the memory of Norman John Powell. It was he who got me interested in political science and, most important, provided a model of the life of a truly serious scholar. A good friend and reliable counsel, Professor Powell was the initial
impetus to every aspect of my career. I think he would have liked to be remembered in the manner in which I personally remember him: as a man thoroughly committed to the pursuit of knowledge. My primary concern at this juncture in my career is to do justice to the lessons he taught me.
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STATE POLITICS, ECONOMICS, AND PUBLIC POLICY

Introduction

In the preface to The Semi-Sovereign People, E. E. Schattschneider stated:

The great problem in American politics is: What makes things happen? We might understand the dynamics of American politics if we knew what is going on when things are happening. (This) question (is) worth asking because obviously tremendous things are going on in American public affairs, even in quiet times.\(^1\)

While the structure and functioning of politics and political systems -- the more process-oriented aspects of political inquiry -- have always been a major concern of political scientists, the outcomes of these have received far less attention. The outcomes of the political process are the central facts of politics and must be explained if we are truly to understand the process -- indeed, if we are to understand politics at all. For these outcomes express the value allocations of a given society, which in turn reflect the situation and "spirit" of that society.

The initial task of the political scientist is describing what happens. From there he can go on to explain why x occurs rather than a, b, c, . . . . . . This research attempts to describe

and explain *inter alia*, why some states spend more than others for certain governmental services. By examining various possible relationships of social, economic, and political conditions with state policy choices an attempt is made to examine the perennial question of politics: "What makes things happen?"

This chapter introduces the issues that are dealt with in this research. Essentially, there are three: 1) which variables are most useful in explaining variations in state policy choices?; 2) how are we to conceptualize the relationship of political competition to the outcomes of the policy-making process?; and 3) is there only one kind of policy system which is capable of describing policy-making in all issue-areas, or does the structure of the policy process vary among different issue areas? In addition, V.O. Key's theory of state politics and public policy is outlined, as is the systems approach of David Easton which is utilized to help test Key's theory. Finally, the variables that are used in this study are discussed, as they relate both to Key's theory and to the ideas of Theodore Lowi which bear on #3 above.

The States as Units for Comparative Analysis

The utility of comparative analyses has come to be more and

---

more appreciated by political scientists. Comparison is basic to the way we perceive, conceptualize, and explain the problems of politics. When describing and explaining various political phenomena, our facts make sense only in relation to other facts (which may be similar or quite different). Macridis believes that comparative inquiry "entails the comparison of variables against a background of uniformity either actual or analytical for the purpose of discovering causal factors that account for variations." And, in the words of Thomas Dye:

Comparison is an integral part of explanation. And all meaningful description is comparative; that is, facts can only be perceived when they are contrasted with some other element in the environment.

The immediate issue, then, concerns the viability of the American states as units for comparative analysis.

Since a primary focus of this study is to determine the relative strength of economic and political variables in explaining variations in state expenditures for certain government services, it is necessary to isolate the effects of each of these factors at various points of the analysis. Dye believes that the American states are very conducive to this mode of inquiry:

5 Dye, op. cit., p. 11.
The American states provide an excellent opportunity for applying comparative analysis in non-experimental research. These fifty separate political systems share a common institutional framework and cultural milieu. All states operate under written constitutions which divide authority between executive, legislative, and judicial branches. The structure and operations of these branches are quite similar from state to state. All states function within the common framework of the American federal system. All states share a national language, national symbols, and a national history. In short, important institutional and cultural factors may be treated as constants for analytical purposes.

This background of institutional and cultural uniformity in the American states makes it easier to isolate causal factors in our analysis of public policy outcomes. Comparative analysis of national political systems is made very difficult because of the many great institutional and cultural differences among national societies; it is difficult to isolate the reasons for variations in system characteristics or policy outcomes where vast differences exist in geography, climate, language, economy, history, religion, and so on. In contrast, when one focuses on the American states many important independent variables are held constant, and the explanatory power of a single set of variables can be more clearly observed.  

While the American states share many cultural and system characteristics, at a later point it is demonstrated that they vary widely on other political process dimensions. This situation should lend itself to an appraisal of the explanatory power of one set of political variables while holding the other group constant.

The economic development dimension is comprised of at least five socioeconomic indicators -- wealth, population density,

6Ibid., pp. 11-12.
education, industrialization, and urbanization. Here again, while some similarity exists among the states, there are considerable differences, thereby making comparative analyses in this area potentially fruitful. For example, of the states considered, median school year completed (1970) ranges from 10.6 for West Virginia to 12.4 for California, Wyoming and Colorado. This relative similarity can be contrasted with median family income data which spans $7,414 for West Virginia and $12,441 for Alaska in 1970. The most pronounced variation occurs on the population density measure where in 1970 Alaska contained 0.5 people per square mile and New Jersey had 953.1 people per square mile. The existence of considerable differences within a general similarity on the economic development dimension would seem to be consistent with the requisites of comparative analysis.

The above has hopefully established at least a *prima facie* case for the present comparative analysis of state policy outputs. The exact contours of this analysis are specified in the ensuing chapters.

**V. O. Key, Jr., Politics, and Competition**

The stimulus for the current policy output debate is usually

---

8Idem.
9Idem.
attributed to V. O. Key, Jr. Although Key himself never actually constructed a theory of the state policy process, the broad features of such a theory can be gleaned from his analysis of politics in the southern states. The most general idea of Southern Politics is that the concept of a two-party system does not apply to the South. Some sense can be made of southern politics if we speak not of inter-party competition but rather of the different varieties of one-party arrangements. Bi-factional parties exhibit many of the characteristics of and perform many of the functions (and in similar ways) of two-party systems outside the South. But while there are a few bi-factional parties in the South there are far more multi-factional systems, and these are the rather unique phenomena which give rise to Key's theory.

In contrast to some Southern states whose politics are organized relatively coherently around two stable and enduring factions, multi-factional politics is a more personalized, diffuse arrangement. Campaigns are organized around individual candidates rather than the more conventional notions of parties bearing identifiable and alternative issue positions. Key explained:

\[\text{Key explained:}\]


\[\text{11 Key believes this factor in part explains the occasional demagogic campaigns of Southern politicians, and the rise of someone like Huey Long.}\]
Consider the element of discontinuity in factionalism. The battle for control of a state is fought between groups newly formed for the particular campaign. The groups lack continuity in name -- as exists under a two-party system -- and they also lack continuity in the make-up of their inner core of professional politicians or leaders. Naturally, they also lack continuity in voter support which, under two-party conditions provides a relatively stable following of voters for each party's candidates whoever they may be.

Discontinuity of faction both confuses the electorate and reflects a failure to organize the voters into groups of more or less like-minded citizens with somewhat similar attitudes toward public policy. Under a system of fluid factions, the voters' task is not simplified by the existence of continuing competing parties with fairly well-organized, general-policy orientations. Factions that form and reform cannot become identified in the mind of the electorate, and the conditions of public choice become far different from those under two-party conditions. The voter is confronted with new faces, new choices, and must function in a sort of state of nature.\(^\text{12}\)

This set of conditions obviously modifies the character of electoral processes in some southern states. These circumstances also have far-reaching policy consequences, for a multi-factional politics tends to be an "issue-less" politics as well. Campaign oratory is centered on the various candidates rather than on a discussion of substantive issues.

Perhaps the major ramification of an issue-less politics

\(^{12}\) Key, op. cit., p. 303.
is that the stakes of the conflict are changed to a battle for power as opposed to a conflict over "power for what purpose?" as in the two-party systems. Since political conflict is often a battle between the "haves" and the "have-nots", this change of the stakes of political conflict is particularly compelling, for issue-less politics is infected with a bias which tends to favor those classes which are on the upper rungs of the social ladder. This works against the lower classes, for it is they who are most in need of public policies that will improve their economic positions. The upper classes, on the other hand, are not as disadvantaged by this brand of politics because their relative socio-economic positions are more secure. Further, the lower classes should pursue a public/political strategy rather than a "private" one, for it is the latter sphere which has put them at a disadvantage in the first place. But a multi-factional system works against the lower classes precisely because it inhibits the crystallization of these issues and their subsequent entry into the political process. Key further outlined the situation of the classes in a multi-factional system:

It follows that the grand objective of the haves is obstruction. Organization is not always necessary to obstruct; it is essential, however, for the promotion of a sustained program in behalf of the have-nots, although not all party or factional organization is dedicated to that purpose. It follows, if these propositions are correct, that over the long run the have-nots lose
in a disorganized politics.\textsuperscript{13}

The factional system simply provides no institutional mechanism for the expression of lower-bracket viewpoints. By change and by exertions of temporary leaders and connivers, candidates are brought into the field, but no continuing, competitive groups carry on the battle. The great virtue of the two-party system is, not that there are two groups with conflicting policy tendencies from which the voters can choose, but that there are two groups of politicians. The fluidity of the factional system handicaps the formation of two such groups within the southern Democratic party, and the inevitable result is that there is no continuing group of "outs" which of necessity must pick up whatever issue is at hand to belabor the "ins."\textsuperscript{14}

Key made no attempt to extrapolate his findings to the American states generally. But his work generated a series of hypotheses which are now being dealt with in the more recent literature on state policy processes. The value of Key's research is that the different structures of political competition in bi- and multi-factional southern states can be perceived as reflecting different state competitive situations in states outside the South. Although these different competitive arrangements usually take place between the Republican and Democratic parties rather than only within the Democratic party, the logic of his theory is still applicable. What now follows is a brief outline of "the Key theory."

\footnotesize
\begin{itemize}
  \item \textsuperscript{13}Ibid., p. 307.
  \item \textsuperscript{14}Ibid., pp. 309-10.
\end{itemize}
Above all else, political parties want power, i.e., to win elections. The precise content of a prospective substantive electoral mandate will be determined to a large extent by the input of the various groups which comprise the party's electoral coalition. In a very real sense, the parties will put forth the kinds of issue-positions which are likely to attract sufficient blocs of voters to ensure a majority. In most states, the largest voter group is made up of the middle, lower-middle, and working classes. Since it is usually necessary to obtain the support of these groups if the party is to be successful, each party will compete with the other in an effort to demonstrate that it (rather than the other) is supporting the interests of the relevant voter blocs. Key claimed that this type of scenario is observed more frequently in bi-factional systems than in multi-factional systems in the South. From this we can infer that the more intense the competition, the more the parties will opt for the kind of legislation that would benefit the have-nots. We now have something of a working hypothesis:

On issues which bear on the have -- have-not struggle, the greater the degree of inter-party competition exhibited within a political system, the more redistributive will be the policy outcomes on those issues.

It is imperative to understand that this hypothesis does not apply across the board to all areas of state policy. It is concerned only with issues that bear directly on the have--have-not struggle. So while certain welfare policies such as
Aid to Dependent Children payments would be expected to conform to the hypothesis, others, like highway expenditures and utility taxes, would not. This distinction is fundamental to any test of Key's theory.

The Model

The model that is utilized in this study, which is presented in schematic form below, is an adaptation of the systems paradigm of David Easton.\textsuperscript{15}

Figure 1.1

\begin{center}
\textbf{THE POLITICAL SYSTEM}

\begin{tikzpicture}
  \node (inputs) {Inputs};
  \node [right of=inputs, xshift=2cm] (demands) {Demands};
  \node [right of=demands, xshift=2cm] (supports) {Supports};
  \node [right of=supports, xshift=2cm] (decisions) {Government Decisions and Actions};
  \node [right of=decisions, xshift=2cm] (outputs) {Outputs};
  \node [below of=decisions, yshift=-1cm] (feedback) {Feedback};
  \node [below of=feedback, yshift=-1cm] (environment) {THE ENVIRONMENT};

  \draw[->] (inputs) -- (demands);
  \draw[->] (demands) -- (supports);
  \draw[->] (supports) -- (decisions);
  \draw[->] (decisions) -- (outputs);
  \draw[->] (decisions) -- (feedback);
  \draw[->] (feedback) -- (environment);

\end{tikzpicture}
\end{center}

Inputs are the things which make the system fluid; in a sense, they are the raw materials of the system, the "stuff" of which political decisions are made. Inputs enter the political system as demands and supports. Demands arise when indi-

\textsuperscript{15}See A Framework for Political Analysis (New Jersey: Prentice-Hall, 1965), and other works.
individuals and groups respond to (real or imagined) environmental conditions and act to promote particular interests, goals, etc. Supports underlie the entire system and consist of the acceptance by the actors in the system of things like procedural norms, the legitimacy of political authority, and acceptance of the eventual outcomes of the system as authoritative and binding on the society. The political system comprises the political institutions, structures, and activity of the society's decision-making apparatus. Outputs are the decisions of the system or, to borrow from Easton, "the authoritative allocation of values for a society." The environment includes the social make-up of the society, as well as its cultural and historical traditions which -- when taken together -- manifest the composite "identity" of that society. The environment includes as well influences which are external to the system (e.g., decisions of the national government, and even actions of other nations).

To summarize briefly the dynamics of the systems paradigm: demands are generated in the environment, and along with the relevant supports become the inputs, the energy of the system. These demands, when acted upon by the political system, are converted into outputs -- the authoritatively allocated values of that society. The feedback function registers the changes.

\[16\text{Ibid.}, \ p. \ 50.\]
exerted on the other aspects of the system as a result of the outputs. From a systems perspective, a change in any part of the system modifies in some way all the other features of that system. For example, a decision to raise taxes will alter the situations of the social classes in the society and will probably modify certain of the procedural arrangements which exist in the polity.

An effort should now be made to put the present study in the context of this systems framework. There are two types of independent variables considered; these two taken together comprise the inputs to the system. The first set attempts to tap certain relevant aspects of the environment. Serious operational problems are encountered here. For example, how are things like cultural norms and historical traditions to be defined, and even more difficult, measured? This study does not pretend to accomplish these tasks, although it does affirm their importance for explaining political behavior. Five socioeconomic variables were chosen as indicators of the general contours of the states' social environments. Median family income isolates the extent of the economic cleavages within the states. Median school year completed for persons over 25 years of age should provide some modest clue to the cultural achievements of the states. Population density, per cent of the labor force employed in non-agricultural activi-
ties, and per cent of the population living in urban areas\(^1\) are variables which indicate the extent of industrialization in the states, as well as the spatial distribution of their citizens. Hopefully, these five variables are capable of differentiating the states on significant economic and social dimensions.

The second set of independent variables is political in nature; in the language of Easton they are called "withinputs."

The distinction between the two is of considerable logical significance:

At times I have been writing as though all the influences or disturbances that had to be considered in understanding how a system manages to persist occurred in the environment of a system. (But) many of these influences may occur within a system itself. Insofar as things happening within a system shape its destinies as a system of interactions, it will be possible to take them into account as they are reflected through the inputs of the members of a system. It does not seem reasonable to speak of these events as inputs since they already occur within the system rather than outside. For the sake of logical consistency we might call them "withinputs." All that would be meant by this neologism is that we have decided to treat, in a unified way, the effects (of) events and conditions both within and without a system.\(^2\)

This group of political variables attempts to measure and rank

\(^{1}\) According to the 1970 Census definition of urban.
the states on the basis of the degree of inter-party competition exhibited within the states. Two different competition indices have been utilized for this task. A primary concern of this research is the determination of which of these two indices more adequately measures the extent of party competition in the American states. We will be able to "hold constant" the influence of certain structures and processes since certain similarities among the states (e.g., separation of powers, Bills of Rights, etc.) have already been established. Undoubtedly this tactic will obscure important differences among the states, but this is a problem common to all such quantitative analyses and cannot be overcome in the present study.

Five policies have been selected to represent policy outcomes: total general expenditures per capita, number of police per 10,000 civilian population, per pupil education expenditures for those in average daily attendance, per capita expenditures for public welfare, and average monthly payments per family for those covered by the Aid to Families with Dependent Children program. More is said concerning the rationale for selecting these particular policies in the next section.

One purpose of this study is to try to determine why some states spend more per capita than others for certain governmental services. The relevant literature suggests two possible explanatory hypotheses which are explored in the pages that
follow. These two are presented in the diagram below.

Figure 1.2

The first hypothesis (broken line) posits a strong positive relationship between economic development and policy outputs. Objective economic conditions are converted into political demands which are then reflected in political decisions. It is something of a one-to-one relationship. The second hypothesis (solid line) assumes significant relationships in this respect, but also posits an "intervening influence," and this influence

19Dye, op. cit.; Key, op. cit.
is political competition. In other words, political variables play a mediating role between the environment and the political system which makes the eventual political decisions. Factors other than political variables should be examined, but a full explanation of public policy outcomes cannot be achieved without some consideration of this influence of political variables. By means of correlation and regression analyses, an evaluation will be made concerning the explanatory power of each of these two sets of variables, and both of them taken together.

The Policy Typology

The selection of policy outcome indicators for the present study is based on the typology offered by Theodore J. Lowi. Lowi believes that public policy should not be analyzed as if it were an undifferentiated mass of governmental actions subject to the same influences and processes. A better under-

standing of policy can be achieved if one thinks in terms of a set of policy sub-systems distinguishable from one another along certain key dimensions. Lowi posits three policy types -- distributive, regulative, and redistributive. If these categories are both distinct from one another and inclusive of all public policies, certain "middle-range" generalizations can be inferred. For example, policies of a distributive nature resemble one another in terms of the nature of the political actors, the relationships among them, the type of power structure for that policy area, etc. So if it is reasonably certain that a given policy is a distributive one, then certain important aspects of how that policy is made and implemented tend to follow.

By doing this for all three types and for all policies, our thinking about particular policies and the policy process generally will be significantly simplified and crystallized.

This policy typology is presented in schematic form on the following page.\(^{21}\)

The chart indicates that Lowi's typology immediately encounters some logical and theoretical problems. First, the logical problem concerns the boundaries of the three policy types. Simply stated, how does one decide to draw the line between distributive and redistributive or, for that matter, between any of the types; one could thus argue that these categories

\(^{21}\)Lowi, \textit{op. cit.}, p. 713.
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![Diagram](image_url)

**Figure 1.3 Arenas and Political Relationships: A Democratic Survey**
are not sufficiently distinct from one another. That is, any policy has some regulative, distributive, and redistributive dimensions contained within it. Second, a theoretical problem is encountered if one defines politics as an essentially redistributive phenomenon. Indeed, Lowi himself is sensitive to this dilemma:

In the long run, all governmental policies may be considered redistributive, because in the long run some people pay more in taxes than they receive in services. Or, all may be thought regulatory because, in the long run, a governmental decision on the use of resources can only displace a private decision about the same resources or at least reduce private alternatives about the resource.\textsuperscript{22}

Lowi's framework is adopted here because it is a useful organizational device and, in spite of the above problems, its potential utility as an analytic tool has not yet been subjected to practical analyses. It should be borne in mind, though, that Lowi devised his framework for use in urban community political analyses, and some adjustments to it must be made for its application to the politics of the American states.

Lowi describes distributive policies as follows:

Distributive policies are characterized by the ease with which they can be disaggregated and dispensed unit by small unit, each unit more or less in isolation from other units and from any general rule. These are policies that are virtually not policies at all but are highly individualized decisions that

\textsuperscript{22}Ibid., p. 690.
only by accumulation can be called a policy.\textsuperscript{23}

Total general expenditures per capita was selected as an example of a distributive policy for this study. While surely this could not be called the paradigm case of a distributive issue, many of the features exhibited in state budgetary processes suggest reasonable conformity with Lowi's notion of distributive.\textsuperscript{24}

The regulatory policy sub-system manifests many of the characteristics embodied in a pluralist approach to politics and political analysis.\textsuperscript{25} Policy tends to be the result of the interplay of group conflict.

Regulatory policies are not capable of the almost infinite amount of disaggregation typical of distributive processes. The impact of regulatory decisions is one of directly raising costs and/or reducing or expanding the alternatives of private individuals. Regulatory policies are distinguishable from distributive in that in the short run the regulatory decision involves a direct choice as to who will be indulged and who deprived.\textsuperscript{26}

Further, the regulatory arena is composed of relatively unstable cleavages among a multiplicity of groups organized

\textsuperscript{23}Ibid., p. 690.

\textsuperscript{24}Some sense of the mechanics of state budgetary decisions can be gleaned from a reading of Aaron Wildavsky's description of the federal process in The Politics of the Budgetary Process (Boston: Little, Brown and Company, 1964).

\textsuperscript{25}The now classic statement of this position is contained in David B. Truman, The Governmental Process (New York: Alfred A. Knopf, Inc., 1951).

\textsuperscript{26}Lowi, \textit{op. cit.}, pp. 690-91.
around tangential relations. Police protection and per pupil expenditures for education\textsuperscript{27} were chosen as examples of regulative state policies.

Redistributive policies are broad and intense in their impacts. They are in some sense class issues, and are clearly those policies that Key had in mind in his discussion of the have--have-not struggle. Per capita public welfare expenditures and Aid to Families with Dependent Children payments were selected as redistributive policies because these two--particularly the latter--are ideally have--have-not issues.

\textbf{What Lies Ahead}

The next chapter reviews some of the literature which bears on the Key theory. Subsequent chapters include a discussion of the concept of political competition as applied to state politics, and an attempt to determine which factors provide the best explanation of why some states spend more than others for certain governmental services.

CHAPTER II
A REVIEW OF THE LITERATURE

V. O. Key's seminal effort in Southern Politics provides a convenient starting point for an overview of the state policy studies -- which is the purpose of this chapter. We begin by proposing some general criteria against which we can evaluate this body of literature, and then present the major findings which bear on an analysis of comparative state policy. In a sense, this chapter endeavors to construct the context within which the findings of this study are assimilated.

Criteria

Perhaps a useful way to begin is to enumerate some of the general criticisms which have been levied against the policy output studies. These provide us with a standard which will be helpful in determining the exact "state of the literature" -- in methodological, substantive, and theoretical terms. Articles by Coulter, and Jacob and Lipsky are useful in this regard. Since these studies are referred to throughout this chapter, perhaps a recitation of some of their major claims will suffice for now. Coulter saw the following as the major problems in the policy literature: correlation is too often confused with explanation and/or causation; the "residual" or unexplained policy variation is unsatisfactorily accounted for; questionable inferences are often made, for example about connections among cleavages, demands,
policy outputs, and conversion processes; political processes among different communities and conversion processes among different communities and among different policy substructures of the same communities are too often assumed to be identical; considering aggregate expenditures as sufficient indices of policy outputs often obscures important considerations such as the qualitative outcomes of these expenditures and various priorities given to certain governmental activities; the failure to develop policy typologies (for example, regulatory, redistributive, etc.); the assumption of linearity in complex statistical relationships; misuse of the concept of regionalism; the unwarranted assumption of significance of formal governmental institutions.¹

To these Jacob and Lipsky added: the improper operationalization of key concepts; the lack of attention to what goes on in Easton's "little black box"; the failure to coordinate behavioral and role perception studies; the lack of contextual analysis in the studies of specific institutions, that is, the failure to compare these institutions with other institutions in the same system or with similar institutions in different systems; the failure to make specific concepts sufficiently distinct and the failure to make total models sufficiently inclusive.²

Two of the above arguments should be emphasized; these concern the notion of conversion processes, and the manner in which certain key concepts are operationalized.

On the simplest level, conversion processes indicate how, for example, inputs are transformed into outputs. These processes are not often specified in some of the policy literature. For instance Dye and others argued that there is something of a direct relationship between economic development and state policy choices. But how is per capita income transformed into a particular level of budget expenditure? Dye paid little attention to things like demand structures, institutional and/or policy elite behavior, etc. Correlation analysis measures association, and that is all. To accept even unusually strong coefficients of correlation as the final products rather than as cues to more complex phenomena does not help very much in terms of solid explanation.

My second point concerns the operationalization of certain key concepts in the model. Specifically, one can easily be confused by the heretofore classification of inputs and outputs. That is, what is an input? Is it really an output? Or is it both? What is the nature of their respective boundaries? For example, if outputs alter certain environmental and political process

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variables (which Easton\(^4\) clearly states that they do), are these variables inputs or outputs or both? If process variables are affected by the environment but do not independently affect policy outputs, can they still be considered intervening variables? Can they even be considered under the broader rubric of inputs or environment? Whether they are inputs or outputs or both of course depends entirely upon how the analyst conceptualizes them. The point is, though, that these conceptualizations should be made clear when reporting research results. In addition, some of the newer approaches to the study of public policy conceive the model in terms different from their predecessors -- for example by treating outputs as the independent variables and examining their impacts on things like the political process (which has traditionally been taken as an independent variable).\(^5\)


Further, some would argue that factors like urbanization and median school year completed are phenomena which are essentially political variables rather than aspects of some nebulous "economic development" dimension because these conditions are in large part determined by political decisions.6

While these caveats are often compelling their effect should not be to immobilize comparative research, but rather to serve as guides for more reflective and theoretically-sound scholarship.

The Earlier Studies

The broad contours of the Key theory were sketched in the first chapter. Briefly, Key found that states with relatively intense and organized political competition were more likely to produce policies conducive to the interests of the lower income groups than were their less-competitive counterparts. These effects were most pronounced in policy areas which were redistributive in nature.

Duane Lockard's study of politics in New England corroborated many of Key's findings for the South, so much so that even the language of the two studies is strikingly similar. Lockard's

6This argument was suggested to me by Patrick L. Eagan (Department of Political Science, University of Massachusetts, Amherst), himself in the vanguard of the new breed of public policy analysts.
conclusions concerning tax policy are representative of what he observed in other redistributive policy areas. He stated:

It (is) my contention that the ultimate significance of a state's party system lies in the effect it has on the making of public policy.

The evidence would seem to indicate that the tax structures of the one-party and two-party states are different in precisely the way that Key suggested. The lower element of the economic pyramid appears to bear the heavier burden in Maine and New Hampshire particularly where not only one-partyism prevails but one-partyism complicated by multifactionalism in the one case and vague, shifting bifactionalism in the other. Vermont's situation is ultimately only slightly better. I cannot recall any great liberal acclaim for the tax structures of Connecticut, Massachusetts, or Rhode Island, but the pressures of the have-nots on the political leaders of competitive parties seem to have helped to produce a generally fairer tax structure in those states.7

In 1963, Richard Dawson and James Robinson published a study which attempted to test the Key-Lockard thesis. Utilizing various measures of political process variables (ipc), socio-economic variables, and policy outputs they found - by means of simple correlation analysis - that the Key-Lockard theory appeared valid. However, when they controlled (partial correlation analysis) for the effects of different variables they found that the relationship between ipc and outputs was not an independent one, but rather a function of the influence exerted by socio-economic conditions on both ipc and policy outputs. This led

them to conclude: "Inter-party competition does not play as influential a role in determining the scope of welfare policies as earlier studies suggested; the level of public social welfare programs is more an effect of socio-economic factors, especially per capita income." 8

In 1966 Richard Hofferbert published a study that dealt with essentially the same kinds of relationships examined by Dawson and Robinson.9 His findings led him to conclude that: "Structural characteristics and the nature of the party system and its operation do not seem to go very far toward explaining the kinds of policies produced in the states." 10

Nineteen sixty-six also brought the massive study of Thomas Dye.11 Dye utilized additional process variables (e.g., malapportionment) and additional environmental variables (e.g., education). He started with almost 100 policy measures, but utilized 54 on the basis of significance. These variables spanned the fields of education, health and welfare, highways, tax and revenue policy, and public (social) regulation. He consistently found process, environmental, and policy variables to


10Ibid., p. 82.

11Dye, op. cit.
be inter-related. Utilizing partial correlation analysis, however, he found policy variables to be most dependent upon environmental conditions, with process variables exerting little or no independent effect. His findings - which agreed with Hofferbert and Dawson and Robinson - led him to conclude: "In short, party competition has no apparent independent effect on 52 of the 54 policy outcomes investigated." The two outcomes that passed the significance tests did not imply an important general role for party competition: "Party competition appears independently related to drop-out rates and mental failures, but this relationship is a product of the peculiar influence of the southern states."  

Finally, 1966 also brought the previously unpublished study of John Fenton. Borrowing heavily from the work of Key on taxonomic schemes of political parties, Fenton's findings largely agreed with those of his former mentor: "The data thus showed that two-party competition does have a measurable effect on the levels of welfare, Aid to Dependent Children, and per pupil expenditures independent of both urbanism and income." Fenton did not summarily dismiss the importance of socioeconomic

12 Ibid., p. 253.
13 Ibid., p. 110.
15 Ibid., p. 45.
conditions; indeed, his data documented their importance. Rather he merely asserted that competition is more important than the Dye school would admit.

A word should be said in an effort to resolve the differences among these early studies, particularly since they were so important to the consequent controversy. This may be done on three levels. Considerable work has been done in attempting to resolve the methodological differences. Fenton and Chamberlayne have identified a number of possible areas that could possibly lead to differential findings. Among these are differences in the operationalization of key concepts: for the political process variables Hofferbert used national election scores in his index (a dubious strategy to be sure), Hofferbert and Dawson and Robinson utilized the statistically questionable method of rank ordering their competition scores, Dawson and Robinson for some reason alternated between unit scores and composite scores, Fenton alone consistently used a composite index, Dye used the additional measures of apportionment and partisanship (the latter also might tend to suppress the other competition scores). The socioeconomic variables were generally uniform but differences existed on things like Fenton using per capita income and Dye utilizing median income. On the policy variables there were, for example, different measures of ADC; Dye included

16Ibid., p. 44.
federal grants-in-aid while Fenton did not. This broad range of methodological differences suggests two things: first, any attempt at useful comparative analysis is frustrated; second, the stark differences among the various findings leads one to suspect all of the studies of operational shortcomings.

An important substantive question also arises. It will be recalled that the original theory, as stated by Key, maintained that competition exerts greater influence the closer the issue is to the have--have-not struggle. Therefore, Fenton's finding that his most significant competition correlation was with ADC benefits would tend to substantiate the Key-Lockard theory. On the other hand, many of Dye's findings that suggest no independent influence for competition (e.g., highways, total expenditures) do not detract from the validity of the Key theory. It is important to remember, however, that Dye's findings concerning policy outputs in general are probably of even greater significance than the dispute surrounding the Key theory. After all, our efforts should be aimed at the total system rather than any one part, no matter how interesting and significant that one area may be.

These studies also raise important intuitive questions -

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particularly in the tenor of Dye's admirable study. For example, in his study of public regulatory policy he found four outputs that were related to voter participation, even after controlling for the effects of economic development - crime rates, prisoners, parolees, and governments per population. Instead of ascribing causal value to voter turnout, he concluded that these outputs "are all symptomatic of a general underdevelopment of human capacities." The same explanation was offered for the independent relationships between competition and dropouts and mental failures. I do not quarrel with his inference. Rather, I question his eagerness to dismiss the importance of process variables, while he is simultaneously reluctant to treat the relationships between economic development and outputs in a similar fashion.

The above discussion suggests that the range and depth of the different conceptions of the three types of variables makes any inference concerning the Key theory tenuous at best. Perhaps the best way to sort out the subsequent literature is to discuss it in terms of these three sets of variables, and see how these studies taken as a whole bear on Key's theory.

Economic Development

It would be presumptuous for any contemporary branch of the

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18 Dye, op. cit., p. 236.
social sciences to claim that it had discovered the need for examining the relationships between social structures and political systems; the importance of this notion goes back at least as far as Aristotle. While the exploration of these ideas was relatively dormant in the earlier parts of this century, interest in them has been revived. Advances in technological expertise and scientific comparative analysis have enhanced greatly the possibilities for research in this area.\(^{19}\)

As stated above, operationalizing the term "environment" poses formidable analytical problems. The phrase "economic development" has been more or less uniformly adopted by political scientists as the analog of the environment, apparently for two reasons. The first is that it is a more descriptive and more readily operationalizable concept. The second concerns the idea that much of what is engendered in the amorphous term

"environment" culminates in the objective social setting which economic development measures. While this certainly does not account for everything that is included in the environment, it should work fairly well given the limits of our methodology.

A dilemma for students of state politics has been one of defining the contours and boundaries of this notion of economic development. For while most concede its importance, there is considerable disagreement concerning the contours of this dimension. That is, which of a whole host of socioeconomic variables best taps the significant features of economic development? While examining the various concepts of this phenomenon, it is important to bear in mind that economic development is the issue, and the socioeconomic variables are employed only because they are potentially useful in measuring this dimension of social life.

Economic development in the states. A useful starting point for an examination of quantitative approaches to comparative state policy is Solomon Fabricant's study of state spending patterns for the first half of this century.20 His conception of economic development consisted of three socioeconomic variables: per capital income, urbanization, and population density. He found these variables to be of considerable help in explaining inter-

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state variations in expenditure patterns:

These three factors together account for a little over 70 percent of the variance among states in per capita total expenditures. In the variables selected we have the major factors, or representatives of them, involved in interstate differences in government activity.21

The earlier studies of state policy undertaken by political scientists followed Fabricant's lead in the selection of indicators of economic development. For example, Dawson and Robinson used per capita income; the percentage of inhabitants engaged in occupations other than agriculture, forestry, and fishing (industrialization); and the percentage of the state's population residing in urban areas.22 Richard Hofferbert used the same three variables in his study.23 In his massive study Dye added median educational level achieved in each state to the list,24 and Fenton chose to use only income and urbanism as measures of economic development.25

Despite the fact that Dye, Fabricant, and others found these socioeconomic variables to be - at times - highly correlated with state expenditure levels, social scientists have begun to question their ability to focus on the more subtle aspects

21 Ibid., p. 123.
22 Dawson and Robinson, op. cit., p. 280.
23 Hofferbert, op. cit.
24 Dye, op. cit., pp. 28-34. Dye used median family income rather than per capita income.
of the social setting. The assumption of a unidimensional, "linear" social structure which is reflected in a few socio-economic variables collectively labelled economic development is becoming less tenable. Although directed at Dye's concept, Richard Hofferbert's comments apply generally to all of these earlier studies:

Dye's study, while providing a groundbreaking compendium of findings and rigorously tested hypotheses, does not clearly take into account the possible multidimensionality of the economic development process he discusses.\(^{26}\)

Further refinements of economic development have taken many different tracks. One new approach is essentially methodological in nature. For example, Sharkansky and Hofferbert employed factor analysis in attempting to demarcate the dimensions of economic development.\(^{27}\) While they achieved some relatively high factor loadings they are less than clear about how these factors are related theoretically to the concept of economic development. Further, it can be argued that factor analysis as an empirical and theoretical tool must be viewed judiciously in


the study of essentially social phenomena.

Young and Moreno utilized Guttman scaling techniques to outline certain aspects of industrialization and social rigidity in the states. Although this study might have been better conceived in political terms, its design offers considerable potential for unravelling some of the complexities of economic development.

Others have attempted to conceive of unique variable matrices. Dye endeavored to construct an index of income inequality. This measure, which is of considerable theoretical import, evoked fairly high coefficients of correlation with policy outputs. These results should be read with caution, though, for Riley and Walker argued persuasively that Dye's index might only be epiphenomenal in the sense of it being merely a regional phenomena rather than a true reflection of income inequality in the states.

Hofferbert believes that the major problems with traditional conceptualizations of social structure and economic development are their assumptions of linearity and unidimensionality.

30 Dennis D. Riley and Jack L. Walker, "Communications," American Political Science Review 63 (September, 1969). See also Dye's rejoinder.
Elliott endeavored to meet some aspects of the linearity problem by laying out the precise contours of a definition of "industrialization;" his points are well-taken. And Hofferbert himself has made a major advance toward delimiting some of the salient dimensions of economic development in the states.

In a factor analysis of socioeconomic conditions in the states, Hofferbert discovered two significant dimensions - "industrialization" and "cultural enrichment." Industrialization included things like income, percent of the population in manufacturing, relative number of telephones, and the value of farm land. Cultural enrichment included factors such as relative number of motor vehicles, divorce rates, percent foreign stock, percent of dwellings owner-occupied, etc. The low amount of variation over time in the infrastructure of his factors added credibility to his analysis. In a parallel study, Hofferbert further exhibited a commendable appreciation of the value and necessity of comparative analyses over time. Here he found that the range of ecological development among the states was narrowing, largely due to the extraordinary achievements of the South in

this regard.  

**Regionalism**: The Transcendental Potpourri

Perhaps the most intractable of all the economic development variables is regionalism. In fact, it is arguable that regionalism should not be treated as an economic development variable at all. Most scholars have considered regionalism as something related to economic development, and there are in fact intra-regional economic similarities which support this approach. But there are many ideas contained in regionalism which are not purely economic -- geography, attitudes, culture, and demographic development patterns, for example. So although regionalism is a variable which has more than just an economic component, it is discussed here as an economic development variable for organizational purposes and because it is in this manner that it is considered by most students of comparative state politics.

In operationalizing the concept, one must make many difficult decisions such as how to divide up the states, whether or not state boundaries should be considered, whether or not contiguity should be a criterion, how to measure regions in empirical

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36On this point see, for example, Joe B. Frantz, "The South as Confirmation," Alvin L. Bertrand, "Comments by a Regional Sociologist," Clarence E. Ayres, "Some Reflections on Regionalism," Charles R. Adrian, "Regional Analysis in Political Science," These four studies appeared in the *Social Science Quarterly* 49 (June, 1968).
terms, etc. Further, how can the shared experiences which culminate in a regional culture be measured -- or more difficult, be held constant. For example, in devising a model of the state policy process Hofferbert allowed for the importance of historical factors, but offered little assistance in conceptualizing this notion.37

Until recently, case studies were the medium through which regional cultures were analyzed.38 Although many of these analyses are highly informative, it is often difficult to integrate them with comparative studies of state policy choices. Again the problem of operationalism looms large. Sharkansky has attempted to conceive regionalism in empirical terms, to unravel some of its components (such as types and levels of economic


activity), and to relate the concept to policy outputs. Although his rather groundbreaking ideas are still in a formative stage, they merit attention.

Sharkansky began his analysis by presenting the rationale for considering regions as significant units of analysis. He argued his case cogently:

A basic assumption in this book is that regional similarities in state politics and public policy reflect some underlying behavioral process whereby the structure and outputs of politics in neighboring states come to resemble one another. The tendency of political leaders and government officials to acquire their cues from regional neighbors has several causes: the belief that neighbors have problems similar to one's own; the attitude among officials and interested citizens that it is "legitimate" to adapt one's programs to those of nearby governments; and the structure of officials' organizational affiliations, which put them into frequent contact with counterparts in neighboring governments.

The belief that officials of neighboring jurisdictions have similar problems is expressed in simple fashion by public officials; beneath it, however, lies a complex set of reasons. On the surface, it means that elites in neighboring states probably have encountered policy questions similar to those currently being faced; consequently the neighbor is likely to have a concrete suggestion to offer or to be informed about the pitfalls to be encountered along the way to certain solutions. But underlying this expectation is the more basic assumption: that the neighboring government is serving a population akin to one's own, with similar needs for public service and similar demands on government agencies. The neighboring government's economy is likely to be similar, presenting a comparable set of resources and needs to government agencies; the same resemblance usually exists between the political environments, with respect to the levels of service
that can receive popular support and to the relationships among administrators, executives, legislators, and private interests. Such resemblances in the population and the economic and political characteristics of neighboring jurisdictions may result from underlying geographical similarities, leading to similar economic and population characteristics; or from shared historical experiences, which may give rise to common political values and similar desires for public services.

Because one's neighbors face similar problems with similar resources, the norms which guide their own service decisions are likely to be within reach of one's own agency; thus, the adaptation to regional models is considered "relevant," "easy," or "feasible" in the light of local conditions. (Further), the legitimacy of (these) regional comparisons tends to feed upon its own past habit.39

Sharkansky proceeded to establish four different regional typologies comprising different assortments of the states, which were classified into seventeen regional groupings. His findings concerning the ability of these regional measures to help explain policy variations among the states are discussed later. For now, it is sufficient to state Sharkansky's conclusions on the viability of regionalism as a theoretical concept.

On the measures of state politics considered in this book, there is greater uniformity within regions than in the nation as a whole. Although these findings do not provide direct evidence about the existence of shared historical experiences or regional norms that govern the behavior of politicians, citizens, or public officials, they do suggest the existence of regional processes — processes which may include shared experiences and norms — at work upon the character of state affairs.  

Sharkansky's analysis represented a new and potentially fruitful approach to the study of regionalism. Most of the work in this area, though, lies ahead. Indeed, Sharkansky himself prudently exercised caution when he "makes no claim to identify the specific features associated with each region (independent of current economic levels) that provide the explanation of current policies."  

Conceptualization and Measurement of the Political Process

As with the socioeconomic variables, the conceptualization of the political process presents formidable operational problems; the distinction between political and social variables is illustrative in this regard. Lineberry and Fowler, for example, have argued that socioeconomic conditions are influential in explaining the differential patterns of adoption of local governmental

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40 Regionalism, p. 75.  
41 Ibid., p. 26.
forms. These kinds of issues will continually be raised, and rightfully so. For now, though, some attempt should be made to present some of the research which bears on the conceptualization and measurement of the political process.

Measuring Executive Performance. The growing complexity of modern society has as a concomitant the enlargement of executive power. While this phenomenon is most clearly observed at the national level, it is evident at the lower strata of government as well. The subtleties of executive performance are difficult to estimate, almost impossible to quantify. The ascendance of quantitative comparative analyses of state government has spawned a few noteworthy, although usually only partially successful, endeavors in this regard.

The problems of measurement have led some scholars to concentrate on the formal powers of governors. Schlesinger's index of formal gubernatorial power was perhaps the best known effort in this regard.Governors were assigned a composite score

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based on points received for four formal powers: budget powers, appointive powers, tenure potential, and veto powers. Beyle, by means of interview data, attempted to check Schlesinger's index against the perceptions of power of the governors themselves. In general, there was a fairly good match between the two. Beyle suggested, though, that Schlesinger's index could be improved by adding a few more items and devising a procedure for "weighting" the various items contained in it.

The major drawback of operations like that of Schlesinger is that, by definition, they analyzed only a part of the picture -- and a small part at that. Formal powers do not necessarily provide realistic cues as to the success of governors in "getting their way" in terms of the enactment of substantive public policies. Further, formal powers say little of things like "anticipated reactions." Sharkansky, and Sharkansky and Turnbull attempted to meet some of these problems in their studies of agency requests, gubernatorial support, and legislative appropriations. And in her study of the relationship of the governor to his


legislative party, McCally found size of legislative majority and proximity of the next election to be associated with the frequency of votes being sustained. In this study, McCally employed highly advanced quantitative techniques. However, these were of little help in measuring things like the personal influence of governors with their legislators. That McCally found this personal influence to be of crucial explanatory value once again underscores the problems of theory and measurement of executive performance.

Legislative Structure. In regard to the various institutional structures of the state governments, it is the legislatures which are most frequently the targets of "reformist" movements. The two areas which have been given the most attention are apportionment and legislative professionalism.

Of all the levels of government, probably the states have been subject to the most criticism in terms of their responsiveness to the needs of the people. The lack of numerical equality in state representative systems has been thought to disadvantage


46"The Governor and His Legislative Party," American Political Science Review 60 (December, 1966).

the interests of those groups in the states who are most in need of help from the government. Yet despite the centrality of concern over apportionment, until recently little research was performed to check the specific extent, causes and consequences of inequality of apportionment. One reason for this has been the absence of any widely accepted measure of malapportionment.

Several efforts have been made to devise an acceptable index of equality of apportionment. In its landmark decision — Baker v. Carr — the Supreme Court relied on the test of the ratio of the smallest to the largest single member district in the state. If one legislator represented a population of 100,000 and another represented 10,000 the ratio would be 10 to 1.\(^48\) This approach, however, encountered several difficulties. For example, it said nothing about the representativeness of a potential majority in a legislature; it merely specified a range, with no reference to the pattern of distribution within that range. In a real sense, this measure obscured many of the same subtleties exhibited in income distribution data.

Three somewhat more rigorous apportionment indices have been devised in an attempt to overcome some of these problems. Dauer and Kelsay have developed an "index of representativeness" which assigned a score to each state based on the minimum percentage of

\(^{48}\)Dye uses this measure in Politics, Economics, and the Public, p. 63.
the state's population which could elect a majority of state legislators. They began with the least populous district and then, in ascending order, added the populations of the larger districts until they got a majority of the legislative districts. This figure was then divided by the population of the state to get a ratio of from .00 to .50. This was done for both houses, whose ratios were added, producing a maximum score of 1.00. While this measure was more refined than that of Dye, it did not directly address itself to some of the more salient cleavages in state politics (like urban v. rural); only "highness" and "littleness" of districts was considered.

David and Eisenberg's "index of urban representation" endeavored to estimate the status of this urban-rural cleavage in state legislatures. The total population of the state was divided by the number of legislative districts in each house, to get something of an "ideal average." This average was then compared with the actual population of the legislative districts in the state's urban areas. A score measuring the degree of urban representation in the state legislature was arrived at by averaging the ratios of both houses of the legislature.


50 Paul T. David and Ralph Eisenberg, Devaluation of the Urban and Suburban Vote (Charlottesville, Virginia: Bureau of Public Administration, University of Virginia, 1961).
A methodologically sophisticated "apportionment score" devised by Schubert and Press combined a measure of the relative distribution of district populations ("skewness", or the normality of the distribution) with measures of the spread of the population ("kurtosis", or the peakedness of the population curve). The scores of each of these three procedures varied sufficiently so that one might conclude that each was tapping a different dimension of apportionment. Taken together, they probably dealt with most of the significant aspects of apportionment. The ability of these measures to account for variations in state spending patterns is explored later on in this chapter.

Textbooks and reformists alike have been harsh in their evaluations of the "professionalism" of state legislators. Amateurism is often thought to be in large part attributable to a set of structural factors extant in state legislatures: low salaries, short sessions, inadequate research and staff facilities, high mobility patterns of state legislators, etc. Until recently, however, little research has been devoted to refining the concept of professionalism in state legislatures, and estimating its impact on state policy. While the latter area is

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still largely unexplored terrain, Grumm,\textsuperscript{52} and Grumm and Clark\textsuperscript{53} have devised a "legislative professionalism index." By means of factor loadings, Grumm has isolated several aspects he feels are indicative of professional legislatures among which are salaries, expenditures for staffs, number of bills introduced during the session, length of sessions, etc. His findings can at best be termed preliminary; much more needs to be done in this area for it to be a useful policy analytic tool.

Patterns of Political Activity. In an attempt to consider crucial aspects of politics not included in analyses of formal powers, political scientists have constructed certain behavioral indices of political activity. Concern has usually been focused on three particular aspects of state politics: voter turnout, inter-party competition, and the partisan structure of state policy-making bodies.

The viability of the first two as policy cues was first suggested by Key.\textsuperscript{54} Political scientists have devoted a considerable amount of time to examining the relationships between socioeconomic characteristics and political participation.\textsuperscript{55} The


\textsuperscript{53}John G. Grumm and Calvin W. Clark, Compensation for Legislators in the Fifty States (Kansas City, Missouri: Citizens Conference on State Legislatures, 1966).

\textsuperscript{54}See Chapter One for a fuller discussion of the Key theory.

\textsuperscript{55}Lester W. Milbrath, "Political Participation in the States," in Jacob and Vines, op. cit.; see also Angus Campbell, et. al., The American Voter (New York: John Wiley & Sons, 1964), and
relationships between these variables and party preferences in the states has also been considered.\textsuperscript{56} A related attitudinal question concerning feelings toward particular state policies has been explored by Weber, and Munger and Mezey.\textsuperscript{57}

The partisan structure of policy-making bodies is usually determined by, for example, using the percent democratic in a state legislature. This index is ordinarily used in conjunction with some measure of interparty competition.\textsuperscript{58} Taken together, these three variables have been utilized in trying to account for differences in state policy decisions. Their success in this endeavor is examined in the next section.

For now, it is essential to stress that these kinds of variables in no way exhaust the consideration of the political process. Often they are used primarily because they rather than others lend themselves to quantification. Other, more subtle factors are of considerable importance as well. For example,

\begin{itemize}
\item Milbrath Political Participation (Chicago: Rand McNally & Company, 1965).
\item Austin Ranney, "Parties in State Politics," in Jacob and Vines, op. cit.
\item The literature dealing with classifications and typologies of state party systems is discussed in the following chapter.
\end{itemize}
the efforts of the parties to influence both election results and their members' behavior once elected are probably crucial.\textsuperscript{59} This factor, however, is difficult to measure precisely, as are things like the informal contacts and powers among the various political actors.\textsuperscript{60} In the future, serious effort must be devoted to these nuances if we are really to get at the "stuff" of politics.

Measures and Determinants of State Policy

A short time ago, a discussion of the determinants of state policy could have been organized around the distinction between those studies which did and those which did not find political process variables to be of some explanatory value. Indeed, the discussion of the Fenton, Dye, Hofferbert, and Dawson and Robinson studies at the beginning of this chapter adopts that very approach.\textsuperscript{61} But welcomed advancements in the study of state policy have transformed this simple distinction into an anachronism. State policy has been demonstrated to be a multi-faceted, multi-dimensional, highly differentiated phenomenon.

\textsuperscript{59}Two excellent studies of party behavior are those of Samuel J. Eldersveld, \textit{Political Parties: A Behavioral Analysis} (Chicago: Rand McNally and Company, 1964), and William J. Grotty, "Party Effort and Its Impact on the Vote," \textit{American Political Science Review} 65 (June, 1971). See also McCally, \textit{op. cit.}

\textsuperscript{60}The classic statement of "the power to persuade" is contained in Richard E. Neustadt, \textit{Presidential Power} (New York: John Wiley & Sons, 1960).

\textsuperscript{61}See footnotes 3, 7 and 8.
Accordingly, I conclude this chapter by discussing some of the earlier literature which treated state policy as a socioeconomically-determined output, then move on to some refinements of this rather rigid position, and conclude with some new research dealing with innovative conceptualizations of policy outputs and policy subsets.

Social Determinism and Public Policy. As previously stated, the earlier studies by political scientists taken as a whole seemed to refute the venerable Key theory. In the words of Dawson and Robinson:

> If the data reported and operations employed have been measuring what we have presumed them to measure, inter-party competition does not play as influential role in determining the nature and scope of welfare policies as earlier studies suggested. High levels of inter-party competition are highly related both to socio-economic factors and to social welfare legislation, but the degree of inter-party competition does not seem to possess the important intervening influence between socio-economic factors and liberal welfare programs that our original hypothesis and theoretical scheme suggested. In short, the evidence points to the relatively greater influence of certain external conditions over one aspect of the political process in the formulation of selected public policies.\(^2\)

At first blush, these earlier studies would seem to be rather disquieting for political scientists in general, and V. O. Key in particular. But two caveats are in order. First, although Dye stated his conclusions concerning the relative im-

portance of the two sets of variables rather confidently, there
is good reason to be cautious in drawing inferences. Richard
Hofferbert, for one, was skeptical of the tenor of Dye's study:

Examining the policy impact of four measures of
economic development, Dye finds between these
and each of fifty-four measures of public policy
multiple correlation coefficients that range
from .27 to .90. From 2.0 percent to 81.0 per-
cent of the variance in these policy indicators,
therefore, is explained by the joint impact of
four economic variables. Furthermore, of fifty-
four multiple correlation coefficients, only
twenty-two are above .70. Only a little more
than a third of Dye's policy measures have half
or more of their variance explained by the
socioeconomic indicators. Furthermore, the
multiple R of the fifty-four coefficients aver-
ges to 60.62, indicating that the mean percent-
age of the variance in any policy indicator ex-
plained by the four economic measures is 36.57.

This 36.57 percent explained by socioeconomic
structure is a significant gain over what we
knew prior to Dye's research. Nevertheless, it
clearly shows that -- insofar as these fifty-four
policy indicators are representative of our
universe of dependent variables -- we still have
an average two-thirds of the variance in policy
to be accounted for by something other than these
particular socioeconomic indicators.\(^63\)

The first caveat, then, is that Dye's evidence was not as strong
as a first reading of his conclusions would seem to indicate.

The second note of caution refers to the selection of poli-
cies and how these relate to the Key theory. For example, Dye's
highest partial correlation coefficients for socioeconomic

He based these observations on Dye's table in Politics, Economics,
and the Public, pp. 286-87.
variables were with average teachers' salaries and public employees' salaries. While it is no doubt true that it is useful to know what causes variations in these policies from state to state, these findings did not address themselves to Key's theory. It is therefore impossible to say that these findings were evidence against Key, when the terms of Key's theory do not admit these findings as relevant data. It is imperative to keep these two caveats in mind in an analysis of the relevant literature.

Economists' Studies. In studying per capita total general expenditures, Fabricant claimed that three socioeconomic indicators -- particularly income -- could "explain" 70% of the variance.64 This study stands as something of a landmark in both cross-sectional and longitudinal analysis, and has inspired a number of studies by economists which are similar in research design.

Fisher used Fabricant's socioeconomic variables in attempting to explain variations in expenditure patterns for several policies.65 His 1957 data did not have explanatory power equal to Fabricant's 1942 set. He claimed that the economic development measures correlated rather strongly with expenditures for police and fire protection, but could explain "a very low proportion of the variations in expenditure for welfare."66

64See footnote 19.
66Ibid., p. 355.
Using some additional variables and a joint regression rather than multiple regression program, Ernest Kurnow attempted to check the findings of Fisher's study. His major argument was that his methodology was capable of eliciting higher regression coefficients. In examining total general expenditures, Morss found that total per capita state and local tax collections "explained" most of the variation in this policy output.

A few economists have gone beyond the Fabricant paradigm in looking for explanations for the variations in state spending patterns. Sacks and his colleagues found per capita income to be their strongest independent variable, but by introducing federal and state aid as additional independent variables the overall explanatory power of their model was greatly enhanced: "The proportion of variation explained when both state and federal aid are included shows quite substantial increases in all categories (policies) over the results when only the three basic factors were used." In a more extensive study of New York State spending patterns, Sacks et al. had their preliminary

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69Seymour Sacks and Robert Harris, "The Determinants of State and Local Government Expenditures and Intergovernmental Flows of Funds," National Tax Journal 17 (March, 1964), p. 82.
findings corroborated.70

In a study of both levels and changes in total expenditures, Bahl and Saunders found federal aid to be the crucial variable.71 However, when they extracted fifteen high income-high density states, they found socioeconomic variables to be of considerably more help than federal aid in accounting for spending variations.72 Among other things, this study raised questions concerning the viability of assumptions of linearity and unidimensionality in expenditure models.73

Of all the studies conducted by economists, the one most worthy of note was a later article by Fisher.74 Here, Fisher employed a set of political process measures as independent variables -- something the other economists failed to do. Further, he divided the independent variables into three groups:


72Ibid., p. 57.


political, demographic, and economic. He then utilized a multiple-partial correlation program to test for the relevant strengths of the three sets of variables. This study should be commended both for its theoretical perception and its methodological astuteness. In addition, his conception of some variables was rather innovative. For example, one economic variable is percent of low income families in the state; this measure would seem to tap a significant dimension of the social structure. In fact, he found this measure to be his single most powerful independent variable. His most significant findings, though, emanated from his multiple-partial computer runs. Here his distinctions between demographic and economic variables paid off, for he found the demographic set to be strongest for some policies, and the economic set dominant in other policy areas. The political variables, while showing some reasonably high coefficients, were found to be less significant than the other two sets. The way he utilized the multiple-partial program addressed itself to the problems of linearity and dimensionality alluded to by Hofferbert and Coulter. Unfortunately, though, his choice of policy indicators and his conceptualization of the political process limited the value of this study as a

75 Ibid., pp. 70-73.
76 For a different, although somewhat less than successful, attempt by a pair of economists to incorporate political factors into expenditure models see Otto Davis and George Haines, "A Political Approach to a Theory of Public Expenditures: The Case
direct test of the Key theory. But it was an excellent study nonetheless.

These econometric studies, although technically sophisticated, provided little by way of theoretical insight for political scientists. Apparently content at achieving high correlation coefficients, their analyses left little room for the dynamics of the political process. Even Fisher's study -- which did use (only) one political variable -- cannot be taken as a realistic test of the importance of politics. Also, the choice of policy indicators in these studies did not address itself directly to the Key theory. This is understandable in light of the different kinds of concerns of economists, but the fact remains that these studies have but marginal bearing on the Key theory.

The studies discussed in this section -- taken as a whole -- represent the position which claims that to explain variations in spending patterns it is sufficient merely to isolate the conditions of economic development extant in the states. However, Richard Hofferbert has argued, in his analysis of "Ecological Development and Policy Change in the American States," that this position is becoming decreasingly useful. In comparing the

states over time in terms of economic development and support for public services, he found that on both counts the relative distance among the states was narrowing. All states were improving, but the lesser developed states were improving more rapidly, thereby closing the gap. More importantly, Hofferbert found that as these gaps have been narrowed over the decades, the ability of socioeconomic variables to account for variations in policy among the states has become progressively more limited: "A further facet of this pattern of increasing similarity is that the strength of connection between ecology and policy declines as the overall variance along each dimension is reduced. It would seem that this decline in the strength of ecology-policy correlations is evidence of an increase in the potential for choice in the deliberations of state policy makers."78

Politics and Policy. This discussion does not reach a point where the relationships among politics, economics, and policy are clearly delineated. However, we can estimate the possibilities for politics as an explanatory variable as evidenced in the relevant literature.

Malapportionment: Correlates and Consequences. Intuitively, it is reasonable to expect noticeable relationships between various socioeconomic measures and the degree of malapportionment. Particularly we would expect the more recently and rapidly urbanized

78Ibid., pp. 474 and 481.
states to be the least fairly apportioned. And since it is the
central urban centers which are usually most in need of government
support for basic services, it might be hypothesized that malap-
portionment exerts a depressing effect on governmental spending
patterns. These notions have been examined by a few political
scientists.

In Politics, Economics, and the Public and in an earlier
article which focused specifically on malapportionment, Dye
presented evidence which was contrary to both of these hypoth-
eses. In terms of the possible causal relationship between
socioeconomic conditions and malapportionment Dye stated that:

Urban, industrial, high-income states are less
likely to discriminate against their urban areas
than rural, low-income agricultural states.
This relationship holds in the non-southern states
as well as in all the fifty states. However,
there is no relationship between economic develop-
ment and malapportionment in the technical sense.
There are no significant correlations between the
index of representativeness or the apportionment
score and any of the socioeconomic measures. The
legislatures of rural farm states are just as
likely to be unrepresentative in the technical
sense as the legislatures of urban industrial
states. The southern states are no more malap-
portioned than the non-southern states.79

In terms of the consequences of malapportionment, Dye was
similarly skeptical of the explanatory value of this factor:

On the whole, the policy choices of malapportion-
ed legislatures are not noticeable different
from the policy choices of well-apportioned legis-
latures. Most of the policy differences which do

79Politics, Economics and the Public, p. 68.
occur turn out to be a product of socio-economic differences among the states rather than a direct product of apportionment practices.

There is no evidence that reapportionment will bring any noticeable liberalization of welfare policies.80

In more recent research, Pulsipher and Weatherby found evidence which challenged both Dye's latter statement above, and his more general findings concerning the inability of inter-party competition to explain variations in policy. They stated:

It is interesting to note that the categories for which both hypotheses (concerning the relationships among the variables) were accepted comprise some of the more important categories of state and local expenditure, and the acceptance of the hypotheses would seem to suggest that apportionment patterns and levels of political competition are more potent influences than some of the recent literature would lead one to believe.

It has been shown that it is possible to accept the hypotheses that malapportionment tends to depress and party competition tends to elevate some of the more important categories of state and local governmental expenditure.81

The excellent study of state legislatures from a comparative perspective provided by Wayne Francis tended to corroborate some of the findings of Pulsipher and Weatherby. Francis believed that there was a fairly close relationship between party competi-


tion and apportionment patterns. He constructed a composite index of apportionment which measured the fairness of apportionment (Schubert and Press), and population stress (the ability of legislatures to adapt apportionment to changes in the population). A four level classification emerged: adaptive, well-apportioned states (high party competition); well-apportioned states with relatively stable populations (mostly competitive with a few exceptions); states with malapportionment and high population stress (10 of 14 rank low in competition); and states with stable populations and poor apportionment (little party conflict). 82 Francis thus believed that there were some rather subtle though important relationships among socioeconomic variables, process measures, and apportionment patterns. And since he conceptualized apportionment patterns as policy outputs because they are essentially political decisions, he speculated that, "policy areas not involving money will exhibit a closer relation to political variables." 83

It is difficult to arbitrate among these studies, except to concede that the debate over the causes and consequences of malapportionment is yet to be resolved. The fact that Dye's, and Pulsipher and Weatherby's studies were roughly similar in conceptualization and research design yet produced conflicting

83 Ibid., p. 71.
results leads one to question the viability of this type of approach to the issues. Perhaps it will take research on things like bloc voting in state legislatures, role perceptions and behavior of salient voting blocs, and even some case studies.  

The Importance of Politics. A number of political scientists have been reluctant to give up the notion that politics is important. Fenton was the first to claim importance for process variables in this genre of quantitative policy output studies.

He has received some help in this regard from others. Duane Lockard examined the relationships among the three sets of variables. He like those of the Dye persuasion, found socioeconomic variables and party competition to be highly related. But unlike Dye and Dawson and Robinson, when he isolated party competition he found that this factor did indeed independently influence variations in spending. The fact that these operations were performed for six welfare policies can be taken as evidence of support for the Key theory. He concluded that, "the influence of party competition is apparent; there appears

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84On this see Coulter, op. cit., pp. 42-43. For some noteworthy endeavors in this regard see, for example, Wayne L. Francis, "Influence and Interaction in a State Legislative Body," American Political Science Review 56 (December, 1962); and John Wahlke, Heinz Eulau, William Buchanan, and Leroy C. Ferguson, "American State Legislators' Role Orientations Toward Pressure Groups," Journal of Politics 22 (May, 1960).

85See footnotes 13 and 16.

to be some grounds for believing that the (Key) hypothesis has some validity.\textsuperscript{87} Lockard also presented significant evidence from his analysis of legislative enactments:

Something further about the political systems of the states may be inferred from investigating the incidence of other laws than those with quantifiable payoffs. The have-not elements of the society also benefit from the passage of such legislation as minimum wage laws, antidiscrimination statutes, small-loan laws, and the absence of right-to-work laws. As it turns out, in three of the four categories there is a significant correlation between competition and these statutes, the exception being small-loan laws.\textsuperscript{88}

Two skilled methodologists, Cnudde and McCrone, attempted to focus directly on Key's theory. Their language demonstrated a sensitivity to some of the ideas Key tried to expound:

Key's status conflict formulation enables us to discard the simplistic hypothesis that party competition is important for explaining policy in general. We would hypothesize that party competition would differentially explain policies as a function of the centrality of the policy area to the have, have-not struggle.\textsuperscript{89}

They attempted to test the validity of three expenditure models: the Dye model (economic development - policy outputs), the Key model (economic development - process variables - policy outputs), and a "hybrid" model. This latter model predicted effects

\textsuperscript{87}\textit{Ibid.}, pp. 199-200.
\textsuperscript{88}\textit{Ibid.}, p. 208.
from both party competition and economic development with party competition's effect emanating from a developmental sequence originating in economic development with differential influence in various policy areas. In addition they were quick to point out that party competition scores do not exhaust the field of political factors which influence political decisions:

This (hybrid) model states that there are "n" number of political variables all of which serve to transform aspects of the environment into public policy. In this model social welfare policies are the result of two forces, both of which originate in socioeconomic development. One is transmitted through the intervening variable party competition and the other appears as a direct effect of development because we have ignored the additional intervening political variables.

In a series of rather sophisticated statistical operations, they produced evidence which led them to conclude:

Although it is not possible to estimate the exact magnitude of the impact of party competition if this is the appropriate model, it does indicate that this political variable does have an impact. Rejection of the spuriousness model (Dye's) then does suggest that even if there are direct effects from the environment party competition still serves as an intervening variable.

As might have been predicted by Key, we tend to have different models with different policies. The extent to which we can reject the spuriousness model seem to vary as a function of the centrality of the policy to the struggle between the have-s and have-nots. Our inferences therefore are consistent with the theory that given the advantages possessed by the have-s, the

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90 Ibid., p. 860.
organization, continuity, and visibility of alternatives provided through inter-party competition is important for the capacity of have-nots to attain policies in their own interests.91

The factor analytical study of Sharkansky and Hofferbert92 to a great extent confirmed the conclusions of Cnudde and McCrone. They discerned two factors -- competition-turnout and professionalism-local reliance -- which were highly correlated with the affluence and industrialization factors of Hofferbert's earlier study.93 In line with Cnudde and McCrone they stated:

The single most important finding of this article may be its emphasis upon multidimensionality in state economics, politics, and public policy. There is no single answer to the question: "Is it politics or economics that has the greatest impact on public policy?" The answer (contrary to the thrust of much recent research) varies with the dimensions of each phenomena that are at issue.94

They found strong relationships between the competition-turnout and welfare-education factors on the one hand, and between professionalism-local reliance and highway-natural resources factors on the other. Predictably, their factor loadings were higher than most of the correlation coefficients of single independent variables which were employed in other studies.

91Ibid., p. 865.
93Hofferbert, "Socioeconomic Dimensions of the American States."
94Hofferbert and Sharkansky, op. cit., p. 878.
These studies are invaluable not only because of their general findings, but also because their research designs lend themselves to a direct confrontation of the Key hypothesis, which they seem to support. Although Sharkansky's study of regionalism\(^5\) was not so conceived, a major part of his data bears on the explanatory value of political factors. He found that although economic characteristics existing within regions are influential determinants of policy outputs, regional non-economic characteristics are at least as important:

The common denominator of variables showing a strong dependence on (regional) non-economic factors is their relative isolation from nationalizing influence.\(^6\)

Economic influence was found to be prominent for regional scores on most highway and public welfare policy measures, and measures relating to federal-state-local and state-local financial arrangements; non-economic regional attributes were the strongest determinants of several education policies, and also Aid to Families with Dependent Children programs.

One might question the inference that the explanatory power of regional non-economic attributes can be taken as evidence of the import of political factors. But it can be argued with some confidence that political styles and habits within regions


\(^{6}\)Regionalism, p. 122.
comprise a fair share of what goes into the concept or regionalism. Regionalism per se is an amorphous concept, and one which is of marginal value unless the various components of it are sorted out. Considering particular political modes and moods as part of regional mores does not seem unrealistic.97

New Dimensions of Policy

Political scientists have utilized some of these more traditional studies as stimuli for new approaches to the study of state policy. Some of the more interesting advances in this regard concern the conceptualization of new policy output measures. A few of these newer studies merit some consideration. Incrementalism. In a battery of studies culminating in Spending in the American States,98 Ira Sharkansky applies some of the ideas of Wildavsky and Lindblom concerning the politics of incremental budgeting.99 Using only state expenditure data, rather

97Some support for this idea can be gleaned from Kessel, op. cit., and Wolfinger and Field, op. cit., See also the works cited in footnote 36.
than the usual combination of state and local figures, Sharkansky found that the best way to predict how much a state will spend in any given year is to determine how much they spent in the previous year(s). Correlation coefficients of current spending with previous spending were about twice as high as the combination of a whole set of political and social variables, and controlling for previous expenditures eliminated a good deal of the explanatory power of this latter group. He concluded:

This chapter has examined statistical relationships among current spending, measures of change in spending, and 46 measures of governmental, political, and socio-economic characteristics of the states.

The principal findings are: (1) Previous expenditures continue to show the strongest association with current spending when considered in controlled relationships along with numerous other potential influences on spending. (2) Measures of governmental and socio-economic characteristics, including federal aid, taxes, state-local financial relationships, state employees, population, urbanization, and industrialization, show significant relationships to current spending while controlling for the influence of previous spending.100

It should also be noted that while political variables demonstrated only limited explanatory power with current spending, their influence on increments of change in spending was considerably greater.101

Policy Impacts. Sharkansky has attempted to go beyond simple

100 Spending in the American States, pp. 76-77.
101 Ibid., pp. 73-76.
input-output analyses by examining the effects policy outputs
have on the quality of various public services.\textsuperscript{102} For example, per pupil expenditures for education were correlated with things like drop-out rates and percentage of pupils attending high school who eventually graduate in an effort to determine whether differential spending patterns make much of a difference. This is an important theoretical endeavor. For it will be recalled that the systems paradigm is interested in how political decisions are made and the effects of these decisions. Most policy studies have not dealt with impacts (or outcomes), largely because these notions are difficult to operationalize. Sharkansky was unable to find a high association between spending levels and the quality of public services as he measured them. These findings are preliminary, though, and his quantitative measures of services tended to be rather crude. His studies should be commended more for their theoretical intent than for their substantive findings.

The Politics of Redistribution. Redistributive politics and policies form the core of the have--have-not struggle. While some aspects of these issues pose formidable operational problems, a few noteworthy though conflicting analyses are available.

Thomas Dye, using a "Lorenz" curve and "Gini coefficients," was able to measure the distribution of income within the states.

\textsuperscript{102}See the works cited in footnote 93, and also Sharkansky, "Government Expenditures and Public Services in the American States," \textit{American Political Science Review} 61 (December, 1967).
He found that income inequality is inversely associated with factors such as low income, ruralism, agriculturalism, lower adult education levels, low party competition and voter turnout, and fragmentation of state policy making bodies.

In correlating his Gini coefficients and some one-dimensional socio-economic variables with a series of policy measures he found, rather surprisingly, that:

While it is true that the Gini index correlates with a large number of policy outcome measures the coefficients obtained with the Gini index are usually not as high as those obtained with specific socio-economic indicators or with factors reflecting environmental dimensions.103

And in a parallel study which employed regression analysis to identify the relationships among inequality, social and political variables, and civil rights and other policies Dye reached similar conclusions:

On the whole, inequality in the states appears to be less influential than levels of economic development in determining policy outcomes. Inequality in America is linked to both economic underdevelopment and the presence of a large racial minority. The political consequences of inequality are reflected in public policy, even in policy fields that are conceptually linked to inequality -- civil rights, welfare, and law and order. The only exception to this generalization is in federal anti-poverty grants that are closely linked to inequality and Negro population concentration. But in general, state policies are more directly linked to economic develop-

103 "Income Inequality and American State Politics," American Political Science Review 63 (March 1969): 162.
ment -- income, urbanization, adult education -- than to inequality or even to voter turnout or party competition.\textsuperscript{104}

These (and other) studies by Dye encounter serious conceptual problems. His methodology was impressive, but his linkages are suspect. For example, Dye claimed considerable explanatory power for his income variable, but little influence for an income inequality variable which was based on this same gross income data. While there may be sound methodological and/or theoretical reasons for this finding, these reasons must be discussed and analyzed when research results are reported. And it is precisely this kind of explanation that is lacking in Dye's work.

In an attempt to go beyond ratio-scaled policy data, McCrone and Cnudde adopted Guttman scaling techniques in their study of anti-discrimination legislation in the states.\textsuperscript{105} Their examination of the relationships among concentrations of blacks, party competition and anti-discrimination legislation produced evidence which challenged Dye's study of civil rights policy. McCrone and Cnudde's theoretical sensitivity strengthened the case for their study. They stated:


Percent Negro is important in determining the degree of state support for civil rights through the enactment of anti-discrimination (legislation) by its inhibiting effects on the level of party competition. The direct effect on this dimension, therefore, is the level of party competition in the state. A political factor interprets the effect of a social variable on policy formation in state political systems. Our model, then, constitutes an empirical systems analysis of some of the relationships between environmental, political, and output variables in state political systems.106

Fry and Winters have expressed the belief that previous policy studies found political variables to be of little importance because of the nature of the policies studied, i.e., levels of expenditures. By using distribution as a policy output (the ration of tax burden to expenditure benefit for the three lowest income classes in the states), they hypothesized that political variables would prove to be of some importance. Their correlation and regression analyses tended to confirm their hypotheses:

The most interesting and significant finding in this study concerns the relative importance of political and socio-economic variables in determining redistributive fiscal policies in the states. Previous studies of policy outcomes in the states have been hard pressed to find an independent impact for the political variables considered, and where the relative impact of political and socio-economic variables has been examined the socio-economic variables have predominated. In the present analysis, these findings are reversed. Not only do the political variables have an independent impact on redistributive policies in the states, they

106 Ibid., p. 528.
also account for considerably more of the variance in redistribution than do socio-economic variables. The relative explanatory power of the political and socio-economic variables is indicated by the multiple-partial coefficients of determination. For the 48 states the multiple-partial for political variables controlled for the socio-economic variables is .46 while the multiple-partial for the socio-economic variables controlled for the political variables is only .27.107

It should be noted, however, that party competition was not one of the political variables which exhibited significant explanatory power.

Innovation. A few recent studies have addressed themselves to the factors surrounding "modernization" and "innovation" in the fifty states. John Crittenden performed a factor analysis which allowed him to rank the states according to modernity. His factors included things like "Metro-Urbanism," "Integrative Message Exchange," "Migratory Pull," and "Scope of Government."108

In a study of Pennsylvania cities, James Clarke correlated socio-economic and political process variables with the referenda results on whether or not to adopt new "reform city charters.109 He found that socioeconomic variables manifested relatively weak correlations, with process variables demonstrat-

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ing a rather significant intervening influence. While his findings are important, the real value of this study lies in Clarke's comments concerning the conceptualization of political process variables:

It is probable, and certainly worthy of further research, that the explanatory importance of socio-economic and political process variables will vary with the type of policy being considered. When noneconomic policies are considered, a stronger association is revealed between political process variables and, in this case, referenda outcomes. These process variables reflect the attitudinal and behavioral dimensions of city politics to a greater degree than the socioeconomic variables.

Another explanation for these differences is that perhaps too much consideration is being given to the relative availability of political data rather than the theoretical relevance of these data to the problem being examined. The result is that political variables are usually defined operationally in structural rather than behavioral or interactional terms. To this extent, the behavioral dimension of politics is being ignored, not assessed, in the policy output studies and the results may be simply a product of the methodology.

What this analysis has demonstrated is not that environmental variables are unimportant, but rather that their importance must be assessed in combination with relevant and meaningful political variables; that is, political process variables which are often recognized but rarely included in comparative urban research. 110

In a similar vein, Andrew Cowart dealt with factors which might possibly influence the adoption of certain Office of

110 Ibid., pp. 1181-82.
Economic Opportunity (OEO) programs. This is interesting particularly because these programs are clearly class-related. His technique was multiple-partial correlation analysis with three groups of independent variables -- socioeconomic, political, and levels of expenditures for on-going and established welfare programs (e.g., ADC). This latter set of variables was included via the hypothesis that since these programs are \textit{prima facie} evidence of support for antipoverty efforts, they would predispose the states who had adopted them to utilize some of the opportunities provided by the newer OEO programs (which are, of course, now defunct). Indeed, his hypothesis was confirmed, for this latter group evoked substantially higher measures of association than did either political or economic factors.

Cowart's discussion, though, raised a few significant questions. For example it is difficult to say with much confidence that welfare expenditures are influential and political and social variables are not when he has not fully isolated the interrelationships among these sets of variables. This critique is particularly compelling when one recalls a whole body of literature which finds relationships among Cowart's three sets of independent variables.

Perhaps the most rigorous of these innovation studies was that of Jack Walker.\footnote{Jack L. Walker, "The Diffusion of Innovations Among the American States," \textit{American Political Science Review} 63 (September,}
diffusion in a decision-making context to account for the spread of innovations across the states, Walker examined 86 programs in different policy areas which were enacted by at least 20 state legislatures prior to 1965. He found fairly strong correlations between indices of wealth and industrialization and his innovation score. He also found some significant simple correlations between competition and innovation, and, rather surprisingly, a strong association between innovation and David and Eisenberg's malapportionment measure. That the correlation between apportionment and innovation even withstood controls for socio-economic variables indicates that although apportionment may not be important in determining levels of support for particular policies, it may be influential in setting the scope of political activity. This finding is further strengthened due to the fact that these correlations were stronger in the 1930-1966 period than in the 1900-1929 period, reflecting the increased degrees of malapportionment in the latter period. He also found that the pattern of the diffusion of innovations among the states was essentially a regional phenomenon, following the rationale offered by Sharkansky.\textsuperscript{112}

Conclusion

The above discussion encompasses the major works which bear on an examination of the comparative study of state public policy. The chapters which follow concern themselves with the substantive findings of the present research enterprise.
CHAPTER III
THE MEASUREMENT OF INTER-PARTY
COMPETITION IN THE STATES

Introduction

The study of political parties has been refined considerably in recent years. One set of tools which has proved useful in crystallizing thinking about parties is the various classificatory schemes of state party systems. Ranney and Kendall alluded to the potential of these endeavors when they wrote:

Distributing "raw" data among types or classes is a necessary and illuminating part of the process of research and discovery in any science, particularly in the early states of the latter's development. But it produces fruitful results only if the types or classes make sense, which they will just to the extent that, inter alia, the variables we fix upon in defining them are the significant ones, and that the classes a) exhaust the phenomena under consideration, and b) do not overlap.¹

Accordingly, this chapter begins by reviewing several typologies of state party systems. Next, a new approach to measuring state political party strength is presented, an approach which relies upon a different kind of data base. Finally, some of the theoretical implications and hypotheses flowing from this new schema are discussed at the end of the chapter.

V.O. Key's *Southern Politics* once again provides the starting point. Key found that the traditional language of inter-party conflict did not apply to the South. He felt that it was more useful to discuss different variants of one-party systems, i.e., one-party bi-factional and multi-factional systems. These two forms of party, both existing under the Democratic label, produced different styles of politics which led to different political consequences. In fact, bi-factional one-party politics exhibited many of the same features observable in competitive two-party states. Multi-factionalism, on the other hand, yielded a fragmented, disorganized, and even "dysfunctional" brand of politics. Although an excellent analysis of the character of Southern state party systems, Key's regionally-based classificatory scheme is of only marginal value to a more general comparison of state political party strength.

Fenton has attempted to refine Key's typology so that it could include non-Southern states. He retained Key's two categories of one-partyism, and divided two-party systems into "issue-oriented" and "job-oriented." Fenton made these distinctions

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3 See *ibid.*, Chapter 14; also the relevant parts of Chapter One of this study.
among state party systems primarily on the basis of the styles and goals of the parties, their effects on governmental performance, and the parties' relationships to interest groups and public opinion. And in his major work on state politics generally, Key presented a typology of state party competition which focused on two factors: the mean Democratic percentage of the general election vote, and the Democratic primary vote as a percentage of the Republican primary vote (1908-52). He then placed the states in one of four categories--strong Republican, less-strong Republican, competitive, and leaning Democratic. The value of Key's work, though, is weakened by the fact that he concentrated solely on the governorship. While competition for this major state office is an important cue to the general character of state party systems, it omits too many other significant party conflict situations.

Ranney and Kendall utilized election results from 1914-1952 for President, U.S. Senator, and Governor in categorizing the states according to the degree of inter-party competition. There were two steps in their method. First they determined the percentage of victories in all elections for the second party in each state, and ranked the states along this line. They found that in 22 states the second party had won less than 25% of all

5Ibid., Chapters 3-5.  
elections. They then tried to make distinctions among these 22 according to how close these elections were despite the fact that the second parties usually lost. This procedure led them to define "modified one-party states" as those in which the second party, while winning less than 25% of all elections, had won over 30% of the vote in over 70% of all elections and had won over 40% of the vote in over 30% of all elections. By the same token, "one-party states" were defined as those in which the second party had won less than 25% of all elections, and had also won over 30% of the vote in less than 70% of all elections and had won over 40% of the vote in less than 30% of all elections.\(^8\) Their data yielded five categories--two party, modified one-party Democratic and Republican, and one-party Democratic and Republican. Ranney and Kendall's measure, particularly in the way it distinguished between the less competitive states, goes a step beyond Key. However, their reliance upon state-wide elections says little about competition for other offices which have a bearing on state policy--like the state legislatures.

After studying election results during a fifteen year period (covering the late 30's to the early 50's), Golembiewski devised a schema consisting of three cells--one-party, two-party, and

\(^8\) For a fuller explanation of this procedure see ibid., pp. 482-85.
weak minority-party. The three aspects of this measure are the percentage of legislative seats held in both the house and the senate, and control of the governorship at three points in time—1937, 1941, 1951. While his categories are rather vague, Colombierski's case was strengthened by his inclusion of state legislative contests.

Considering gubernatorial elections from 1870 to 1950, Schlesinger introduced a new and provocative concept into the study of state party strength. Schlesinger accepted the notion that one way of determining the existence of a competitive situation is to examine the division in party control of a particular office over a given time period. But he ventured that this method would tell only part of the story:

There is a second dimension which must be considered in the concept of political competition, and this is the rapidity with which the parties alternate in their control of an office. Perhaps the rate of alternation is even more important in giving the participants a sense of competition than is the overall division of victories. For example, in national presidential politics since 1872 the overall division of victories has given the Republicans 12 elections and the Democrats nine. The two parties, are, thus, highly competitive in respect to the overall dimension. But as is immediately apparent, there has been a low rate of alternation between the parties, for there have been periods of as long as 20 years, or an entire political generation, in which either

10 "A Two-Dimensional Scheme for Classifying States According to the Degree of Inter-Party Competition," American Political Science Review 50 (December, 1956).
the Republicans or the Democrats have had continuous control of the presidency. Competition has been sporadic. The measure of such periods of one-party control, or the rate of party alternation, we shall call the cyclical dimension.11

In his competition schema, Schlesinger used the traditional approach (overall), and his new method (cyclical). His data yielded five categories, and it is worth describing them in some detail.

1. Competitive - In these states the minority party has continuously provided a serious challenge for the control of the governorship and the periods of one-party dominance have been relatively few and brief.

2. Cyclically-Competitive - Those states which are competitive in respect to the overall dimension, but which have had long periods of domination by a single party.

3. One-Party Cyclical - Those states in which one party has overall a clear predominance in number of victories, but in which a minority party has been able to win short periods of control, usually as many as two or three consecutive victories.

4. One-Party Predominant - These states are similar to the one-party cyclical states in terms of the overall dimension of competition. They differ in that the minority parties fail to succeed themselves very often, although they win single victories. The distinction between the one-party predominant and the one-party cyclical states lies in the position of the minority party. In the former states, the lesser party gives every evidence of becoming fragmentary and weak in organization. When it wins, it is most likely to be purely by default, due to some sudden vulnerability of the majority party, a major national trend, or a split within the major party. The electorate is not irrevocably wedded to the dominant party; a majority of the voters can bring themselves to vote for the opposite party. But the minority organization is so weak that it is unable to follow up its momentary advantage, fre-

11Ibid., p. 1122.
quently because of its inability to present attractive and capable candidates. The fact, however, that the electorates of these one-party predominant states do show some willingness to vote for the lesser party makes them typologically different from the one-party states.

5. One-Party - Their salient characteristic is the minority party's inability, up to 1950, to win the governorship.12

The major drawback of this study is, obviously, the fact that only gubernatorial elections were considered. Schlesinger tried to meet this problem in a follow-up piece in which he extended his ideas to other contests.13

In this later study, Schlesinger retained the overall and cyclical dimensions and extended the number of offices considered to include most state-wide elections for state officials.14 Schlesinger was interested primarily in discerning a "range of competition" for each state rather than determining the comparative positions of the states in terms of overall competitiveness. He stated:

It is far from adequate to describe a state's competitive system solely in terms of a unilinear measure. Nor is it enough simply to add the cyclical dimension. It is as important in measuring competition within a party system to point out the range from one-office to another.15

12Ibid., pp. 1124-26.
14In addition to the governor, he included U.S. Senator, U.S. Congressmen who are elected on an at-large basis, Lieutenant Governor, Secretary of State, Attorney General, Auditor, Treasurer, and Comptroller.
15Ibid., p. 201.
Schlesinger measured competition—in overall and cyclical terms—for each office, which taken together delimited the "range of competition" for each state. While Schlesinger's approach was certainly innovative, its applicability for a comparative analysis of state public policy is limited. That is, the "range of competition" scores, while significant political facts, are not as useful as composite party competition scores.

Hofferbert employed Schlesinger's cyclical and overall dimensions in his analysis of elections for President, U.S. Senator, and Governor for the years 1932-62. The major difference between these two studies lies in the offices considered. Hofferbert ultimately rank-ordered the states on the basis of their composite competition scores for the three offices. It should be noted that Hofferbert did not include state legislative races, which are important cues to the competitive situations within the states. In a later study, Hofferbert used his rank-ordering as an independent variable against a series of state policy outputs.

17"The Relationship between Public Policy and Some Structural and Environmental Variables in the American States," *American Political Science Review* 60 (March, 1966). Why Hofferbert resorted to a rank order classification when his composite scores (upon which he based his ordering) were ratio-scaled figures is a bit puzzling. Use of the latter would have made his schema more amenable to advanced statistical operations.
Ranney devised an "index of competitiveness" which contained two particularly attractive features—it included races for the state legislatures, and the scores were in the form of ratio-scaled data.18 There were four elements in this composite index:

1) the average per cent of the popular vote won by Democratic gubernatorial candidates,
2) and 3) the average per cent of the seats in the state house and senate held by the Democrats, and
3) the per cent of all terms for governor, senate, and house in which the Democrats had control.

Excellent as it stands, Ranney's measure would have profited from a refinement of the fourth aspect of the index. For example, while the number of terms the Democrats controlled the entire government is an important fact, it would also be useful to know the frequency and consequences of one party controlling the executive and the other the legislature.

Lockard found the earlier measures inadequate "because none of them takes into account the extent of party voting in legislatures, or the character of factions within those states in which one party predominates."19 He arranged groupings of states

according to the closeness of party competition on five factors: voting for president and governor, party representation in legislatures, the degree of party voting cohesion in legislative roll calls, and the extent of bi- or multi-factional alignment in the less competitive states.20 Lockard's ideas and method are suggestive, although some aspects of his index are not easily quantifiable and data on the degree of party voting are not very reliable—problems which he himself conceded. Further, his data did not allow him to go beyond merely placing the states into categories, and the distinctions among these various groups lack precision.

A number of explicitly policy output studies have employed various IPC measures as independent variables. Studies by Dawson and Robinson, Dye, and Fenton are typical.21 All of these authors used indices comprised of the popular vote for governor, and the distribution of legislative seats between the parties. There are, though, some conceptual problems with these indices. For example,

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20 Ibič, p. 195.

Dawson and Robinson rank ordered the states on the three dimensions, and then averaged these three rank orderings for a final rank ordering.\textsuperscript{22} This two-step rank ordering may have obscured some subtle but important distinctions among the data which might have been revealed had the data been presented in interval form. Although Dye arranged his political data in interval fashion, some problems remained. For one thing, his political data were for the years 1954-64, and his policy data were mostly for the years 1961-64.\textsuperscript{23} It is difficult to discern the linkage between 1954 political data and 1961 (or 1964) policy measures.

To be sure, the budgetary process admits some "lag" in the appropriations process, i.e., 1964 expenditure decisions were made mostly in 1962 and 1963. But is it realistic to assume that political conditions extant in 1954 will have affected how much money was spent in 1961 or 1964? It may be, but the nature of this linkage should have been explained in some detail. Failure to do so quite naturally raises some conceptual questions. These issues were unexplored in Dye's study.

Mark Stern proposed as a measure of party competition one which had predictive capability and also was consistent with the perceptions of the actors in the political system under examina-

\textsuperscript{22} It should be noted that Dawson and Robinson also included Schlesinger-like cyclical factors in their index, but those also were rank orderings.

\textsuperscript{23} See p. 49.
This measure consisted of the mean percentage of the vote obtained by the candidates of the majority party (1949-67). Although Stern claimed success for his measure on both of the above tests, this measure is of only marginal importance to discussions of state party strength because only one county of one state was studied.

One of the more ambitious treatments of this topic was presented by David Pfeiffer, who attempted to devise a measure of systemic stability which was an outgrowth of his party competition schema. Pfeiffer gathered data for all state-wide general elections for the years 1940-64. He then calculated the arithmetic mean of the percentages for the base period for the Democrats, Republicans, and third parties. The states were categorized on the basis of their composite scores as One-Party Democratic through One-Party Republican with five intervening categories.

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24 "Measuring Interparty Competition: A Proposal and a Test of a Method," Journal of Politics 34 (August, 1972). In a different study Casstevens and Press used the Schlesinger (1955), Ranney and Kendall, and Key interp measures in their study of factors influencing welfare policy. While they claimed that there was a positive relationship their statements should be read with caution, for no statistical operations were performed. They drew their inferences merely through a visual inspection of graphical presentations of the data; they attempted neither to improve upon nor merge the three interp measures. See "The Context of Democratic Competition in American State Politics," American Journal of Sociology 68 (March, 1963). For a critique of this study see Phillips Cutright, "Casstevens and Press," American Journal of Sociology 69 (November, 1963); see also the "Rejoinder" which follows.

ries. His rather ingenious measure of systemic stability was measured as follows:

Each state was located on the scale according to its normal competitive behavior. Then the total number of moves it could make on the scale toward the two-party category was determined. For example, a normally two-party state could make zero moves while a one-party state could make three moves. The figures for all the states were added giving the number of shifts on the scale necessary for a completely competitive election. Next, each state was categorized according to its vote for the Presidency in that year and the total number of shifts made by all states in that election was figured. If a state moved away from the two-party category the moves were rated negatively. The sum of the moves in the particular Presidential election was then divided by the sum of all possible moves to give the Index of Two-Party Change for that election in that year. The stability scale is identical to the two-party change scale.26

The Studies Criticized

Several comments are in order concerning these various classificatory schemes taken as a whole. It should be noted immediately, though, that while there are some criticisms which apply to these studies generally, each should be evaluated in the context of the overall objectives of the research enterprise of which it is a part. Hofferbert has stated this point succinctly:

No system of classification may be evaluated without regard for the purposes it is to serve. Classification is a tool of analysis rather than an objective in its own right.27

Hofferbert then added that there is a limitation to this position:

26Tibid., pp. 464-65.
(However), in any area of inquiry, there is a need for a common medium of discourse. Where a number of scholars are dealing with the same or similar phenomena, albeit with various ends in view, considerable advantage is gained by uniformity of terminological and conceptual usage. In the first place, it is advantageous for purposes of comparability of findings and the consequent growth of a cumulative body of knowledge. Furthermore, as the literature on American party systems well demonstrates, conceptual regularity could make for considerable economy in the reporting of research results. If there are acceptable systems for classifying the major variables of a field of inquiry, each scholar need not tax his time and effort explaining at length the techniques of classification employed in his specific project.28

Since the purpose of this study is to examine various factors which influence state policy choices, the relevant literature is discussed in the context of how well the various competition measures are conducive to this task.

Dawson and Robinson stated that there are three major problem areas in designing an index of political competition:

1) which time period should be considered
2) which offices should be included
3) which of several ways of looking at competitiveness, within the context of the two preceding factors, most accurately measures competition.29

These three points are useful in organizing the present discussion.

Many scholars have claimed that the selection of the years which comprise the base periods is arbitrary.30 This is, of

28Ibid.
30See, for example, Colombiowski, op. cit., and Pfeiffer, op. cit.
course, one point for which the purposes of the study are decisive. If the purpose is merely to classify, this point is a relatively minor one. But if the competition index is to be utilized as an independent variable in studying state policy choices, this criticism acquires more force. As stated above, Dye used political data from the 50's to study policy decisions of the 60's. Here, the selection of the time period is both arbitrary and incorrect. There is another, more subtle aspect which deals with the selection of an appropriate time period:

Not only is the choice of the base period arbitrary, it may also be quite misleading. "Long" base periods may include one or more secular movements in the data which make aggregate figures meaningless averages; "short" base periods may focus on "bumps" on a smooth curve of party strength which give quite an erroneous impression on the curve itself.31

This problem is more difficult to deal with, and perhaps is not capable of resolution. Maybe all that can be done is to assure that caution is exercised in the reading of research results.

Problems concerning which offices to include in the index are also formidable, and again reference must be made to the purposes of the study. It is unreliable to concentrate on only one office, as did Key, and Schlesinger in his earlier study. If one is interested in determining the degree of state competition in overall terms, then use of races for the Presidency and the U.S. Senate are acceptable. But if a comparative study of

31 Colembiewski, op. cit., p. 498.
state policy is the issue, then only state offices should be included. Nofferbert used data for the Presidency, U.S. Senate, and Governor, but only the latter is a state office. Furthermore, while few would deny the importance of the state legislatures, these contests are typically excluded in the various competition indices. The research reported by Schlesinger, Pfeiffer, and Nofferbert are notable examples.

The third area of criticism relates to how the first two factors (time periods and offices) are employed. The major problem in this regard concerns the methods of classification. Most of the studies have placed the states into various categories, and some have resorted to the technique of rank ordering. In many cases the categories are too crude. That is, categories such as two-party and one-party Democratic and Republican often obscure subtle but important differences among the states in any given category. There is also some question about the logical distinctiveness of the various categories. For example, where do you draw the line between, say, modified two-party and modified one-party Republican or Democratic? The technique of rank ordering also presents some problems. Ranking the states from 1 to n can be misleading if the data happen to fall in clusters. For example, states 7 and 8 may be very close to one another in terms of competitiveness, while there may be a considerable gap between states 3 and 9. Rank ordering will obscure these subtle, but nonetheless important conditions. Perhaps more significant is the
fact that data which are rank ordered are not susceptible to complex statistical operations. The fact that such methodology has achieved such a prominent position in the comparative study of state policy underscores the importance of this criticism. Political data must be arranged in interval form to take advantage of these technological advances.

Several authors (e.g., Schlesinger) have endeavored to incorporate some notion of the pendulum effect, i.e., alterations in office into their competition indices. These efforts, though, encounter some serious problems. As they are presented, the pendulum measures indicate alternations in office over a particular base period, but do not usually indicate trends. Pfeiffer has described a more serious limit to this pendulum notion:

The major criticism (of the pendulum concept) has to do with its interpretation and convenience. Regarding interpretation, one loss out of five elections means a 20.0% turnover. If these five elections are Presidential elections, they span 20 years. If they are U.S. Senatorial elections, they span either 20 or 30 years depending on whether you treat the offices as separate. Two losses out of ten elections would also give a 20.0% figure, but now over spans of 40 and 60 years respectively. Caution is necessary to avoid misinterpretation of such results, but even if caution is observed, such a measure can give the appearance of arbitrariness.

Regarding convenience, this researcher is compelled to process his raw data three times in different ways each time. First, he must obtain the "overall" dimension, that is, percent of elections won. Second, he must calculate the percent of turnover. Third—to distinguish cycles, if any—he must determine how long it is between alternations. This process must
also be repeated for each office.\textsuperscript{32}

Zody and Luttbeg have tried to determine the distinctiveness of several measures of inter-party competition.\textsuperscript{33} Using a Spearman $r$, they tested for the inter-correlation among five measures—those of Dawson and Robinson, Ranney, and Ranney and Kendall (2), and Hofferbert. The Spearman $r$'s among the measures ranged from .80 to .99, which led them to conclude that:

1) the measures are considerably more similar than dissimilar;
2) the major differences between the measures seem to lie in subjective rather than empirical considerations; and finally
3) the argument for methodological individualism appears weak as there is significant correlation between the measures regardless of the offices or time period considered.\textsuperscript{34}

Caution should be exercised, though, for perhaps Zody and Luttbeg have overstated their case. For example, they considered only five measures, and the ones excluded could be expected to tap different aspects of party competition. The indices of Schlesinger and Pfeiffer immediately come to mind in this regard. Furthermore, the measures they examined all used the rank ordering technique. The dangers inherent in this method necessarily detract from the forcefulness of the three points of Zody and

\begin{itemize}
\item \textsuperscript{32}Pfeiffer, op. cit., pp. 460-61.
\item \textsuperscript{33}"An Evaluation of Various Measures of State Party Competition," \textit{Western Political Quarterly} 21 (December, 1968).
\item \textsuperscript{34}Ibid., p. 724.
\end{itemize}
Lutfbeg which were enumerated above.

**A New Measure of Inter-Party Competition**

It has been stated many times, in many different ways, by many different authors, that a measure of inter-party competition must be evaluated on the basis of how well it conforms to the objectives of the overall research enterprise. It is the purpose of this study to determine which of several factors are most influential in explaining variations in state expenditure patterns. Implicit in this orientation is the belief that the states should be treated as relatively autonomous decision-making units. And although it is difficult to state this claim with much confidence given the nature of governmental activity at all levels in the United States, this view is a *sine qua non* if we are to make any attempt at all at unravelling the roles and processes of state governmental decision-making. Flowing from this orientation is the contention that when studying the influence of political competition on state decision-making, only state offices should be considered. Again, while it is uncontestable that the work done in Washington by Presidents, Senators, and Congressmen has important consequences for state government, and while it is also true that these national political actors often have direct influence on state political and governmental machinery, theoretical precision requires that these offices not be included in state party competition indices. The several measures which did include
non-state offices in their calculations are therefore inadequate for the purposes of this study, however useful they may be for other tasks. Also, many of the attempts at classifying the states have omitted contests for the state legislatures. Since every state decision must be dealt with to some extent by these bodies (or at least all expenditure decisions), competition measures which exclude them are therefore deficient, at least for the purposes of this study.

Of all the measures which have been examined in this chapter, only those of Ranney, Dawson and Robinson, Fenton, and Lockard pass these two preliminary tests. Even these do not pass muster when a more stringent requirement is erected. Pfeiffer alluded to this test when he stated that, "Percentage of elections won and percentage of seats held (or terms) both are functions of percentage of vote in almost every case." The point to be emphasized here is that the distribution of legislative seats between the parties is a cue to the character of competition for those offices--but that is all. This argument should be dissected further.

It is a major contention of this paper that legislative competition measures which rely on the distribution of seats within those bodies can obscure more than they reveal. Using this kind of approach, a legislative body composed of, say, 100 seats, can be divided equally between Republicans and Democrats. This would be a situation of "perfect" two-party competition. However, it is
at least logically possible that all of these seats were uncontested by one of the parties in the election. Admittedly this example is a bit extreme. However, in each state several if not all legislative elections are in fact uncontested, and there are numerous instances in which one candidate will receive 70%, 80%, 90% of the vote. These kinds of contests are by no means atypical. Using a "distribution of seats" measure, contests in which the vote is 100%-0% or 80%-20%, are assigned the same score as elections where the vote is 60%-40% or 51%-49%. The ordinary discourse of the term "political competition" indicates that there is something different about these various kinds of competitive situations. A distribution of seats measure is not capable of revealing these subtle but crucial distinctions; in fact it totally obliterates them.

Two lines of response to this argument can be anticipated. The first concerns the availability of alternate data and the convenience of its employment. While this is a respectable and realistic response, it should not be allowed to overrule the requirements of logical and theoretical precision. The second line of response is theoretical in nature. It would include the argument

that the task is explaining policy, and the relevant political information lies in the behavior of state (in this case legislative) officials. The relevant data then are the distribution of seats among political actors who comprise the (legislative) policy-making body. That is, we must observe the character and consequences of different competitive situations within the body making actual decisions—that is where the important party conflict takes place. Implicit in this notion, though, is the claim that legislative parties are cohesive units, behave as cohesive units and can be evaluated as such. A logical extension of this argument is that what we have in state governments are examples of "the responsible parties model". I would argue that this is not the case. While there is some merit to the claim that state legislative parties approach this model more than does our national legislature, neither could accurately be termed a responsible parties situation.37 I am, in effect, claiming that these earlier measures are not valid. Gurr has stated that: "A measure or indicator is valid if it is an adequate measure of what it is supposed to represent."38 I have attempted to illustrate that the

37 The literature dealing with the responsible parties model as applied to the United States would require a discussion too lengthy for the present purpose. Perhaps the classic discussion of this topic is contained in "Toward a More Responsible Two-Party System," American Political Science Review 44 (September, 1950), Supplement. An excellent "contemporary" analysis is contained in Gerald M. Pomper, "Toward a More Responsible Two-Party System? What, Again?", Journal of Politics 33 (November, 1971).
previous measures are not valid precisely because they do not address themselves to the key aspect of political competition in the states. If the theoretical construct (model) does not apply, then the measure loses its applicability. The previous measures in a sense are "conceptual reductions," which measure partisan divisions in legislatures but not inter-party competition in state elections.

To summarize, none of the four measures of party competition which passed the two preliminary tests are adequate because all of them implicitly are wedded to a model of state party politics which does not apply to the realities of state political competition. Until an adequate alternative measure which meets these problems is devised, no claims concerning the importance of party competition as an explanatory tool in the comparative study of

39 "A conceptual reduction approach to the validity problem is to reduce the theoretical distance between what the polimetrical claims to be measuring and what he is in fact measuring." Ibid., p. 45.

40 Curr also presented an excellent discussion of the technical criterion of "reliability" (ibid., pp. 49-59). Reliability does not pose as many problems for the previous measures as does validity. There is, however, some cause for caution in this regard. For all of the previous measures were cut essentially from the same fabric yet the different results obtained with these various measures were not always consistent with one another. It is possible, though, that different base periods, offices considered, etc., accounted for much of this variation.
state policy can be made with much confidence. In effect, no
evaluation of the influence of this phenomenon can be attempted
until it is measured adequately.

A new method of measuring inter-party competition is present-
ed here as an attempt to meet this problem. There are three com-
ponents to this new measure:

1. 1 minus the percentage of the vote received
   by the winning candidate in gubernatorial
elections;
2. 1 minus the average vote of all candidates
   of the victorious party in the elections for
   the upper house; and
3. 1 minus the average vote of all candidates
   of the victorious party in the elections for
   the lower house.

The arithmetic mean of these three components is the composite
IPC score for a given state for a given year. Computation of the
governor score is similar to the methods of, for example, Dye
and Dawson and Robinson. The major difference lies in measuring
legislative competition. Instead of using percentage of seats,
percentage of vote is emphasized. That is, the percentage of the
vote each of the major parties received in each legislative race
for the house and the senate was determined. The arithmetic
mean for each of the parties in all of the races for both houses
was then computed. The mean of these two, and the governor vote,
were then combined to produce a composite competition score for
that year. This procedure was performed for all elections which
took place between the years 1958-68.

Perhaps the major problems with this new approach are the
convenience and availability of the data. A letter requesting the relevant electoral data was sent to the secretary of state of each of the fifty states. Follow-up letters and numerous phone calls were also made to try to obtain some of the data which did not follow the original letter. Some states responded that they did not have the resources to duplicate the relevant material, but it could be obtained in person. This alternative was impossible. Other states said that the relevant data were collected by the individual counties, with no central repository. Several others said that they had no data which pre-dated their new apportionment schemes implemented around 1962. Other states stated flat-out that they simply did not keep such records. And, of course, there were a few that simply did not respond at all. I was able to assemble complete sets of data for 19 states. The test of this new ipe measure, therefore, is necessarily of an exploratory nature. Since data collection at the state level is becoming more complete and efficient, it should be possible to get these data for all the states in the not too distant future.

In addition to the availability problem, the computations necessary for this new measure are considerably more time consuming. For the distribution of seats measures, it was necessary merely to compute the percentage of seats for each party in each house. It took only two days to perform these operations for the 10 year period. The newer method involves considerably more time, for the percentages of the parties for each election, in each house,
for each year must be determined. Then all of the contests must be averaged to obtain the competition score for one house for one year, which is then combined with the two other aspects of the measure to get the composite index for that year. This point should be further emphasized. For example, if one were to calculate a "distribution of seats" score for the lower house of the Massachusetts legislature, it would merely represent the per cent of the seats each party held, i.e., one mathematical operation. On the new measure, one would have to determine the percent of the vote for each of the parties for 200 districts, and then get the arithmetic mean of all of these races. Since these data must be re-checked, the entire process is rather time consuming. While it took two days to compute the older measure, it took over six months to complete the computations to obtain the new measure. Had all fifty states been included, it would have taken well over a year to compute one variable! This is certainly a problem, given the time and budgetary constraints facing most social scientists. However, if this new measure demonstrates considerable explanatory power and if it in fact better reflects the realities of state politics than do the other measures, then it is a problem which will have to be dealt with.

This new measure does, however, encounter some problems in addition to those of data availability and length of time computing the index as noted above. Two problems concern the reliability of the index. On the one hand, the accuracy of the elec-
tion statistics as they are recorded by state officials often can be questioned. On the other hand, since several thousand computations would be required for a ten year composite index of the fifty states, the margin for error is increased commensurably. Unless the new measure shows considerably more potential than the older ones, these technical problems will loom particularly large.

Neither the old nor the new measures have much applicability for states which are heavily one-party oriented. For in these states (e.g., the southern states) the important political competition is in the primaries, with general elections being usually anti-climactic, often perfunctory. In addition, none of the measures are addressed to other important kinds of political competition, for example: inter-party and inter-factional (intra-party) competition within the legislature, party competition between the executive and legislature under conditions of single party control, divided party control, etc.

Finally, even at the legislative election level only, all quantitative measures obscure some of the richness and many of the nuances of particular political campaigns.41 On the other hand, though, while case studies can capture these phenomena they necessarily sacrifice rigor and are not readily susceptible to com-

41 For an interesting endeavor in this regard see Jerome M. Mileur and George T. Sulem, Campaigning for the Massachusetts Senate (Amherst: University of Massachusetts Press, 1974).
parative analyses.

The nineteen states for which the relevant data were available are listed on this page along with their composite IPC scores for the 1952-63 base period.

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Key:
- Green: Democratic
- Orange: Republican
- Blue: Independent
- Yellow: Two-party
- Red: One-party

Source: 1972-73 Senate Majority: Democratic; House Majority: Republican; Governor: Democratic.
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**VOTE KEY**
- Kendall
- Library
- Schedules

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**Note:** The text appears to be a table listing counties and groups with corresponding types and states. The table is incomplete and the text is not clearly legible.
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<td>V</td>
<td>Oregon</td>
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</table>
It has been stated several times throughout this chapter that a comparison of the various ipc measures is futile because of the differences in base periods, offices studied, etc. Nonetheless, the standing of the states on several of these measures can be found in the appendix to this chapter. For illustrative purposes, the chart which appeared on the previous pages lists the nineteen states which were used in this study, and indicates their positions for each of the various measures of ipc. The second to last column is labeled "standard". It is similar in design to the Dye and Fenton measures, but since the latter two used different base periods than that spanned by the new measure, a comparable index was assembled for the relevant years. This was necessary since a comparison between the new measure and the more conventional distribution of seats measures is an important concern of this study.

**Conclusion**

This chapter has endeavored to accomplish two objectives:

a) to present the major attempts at classifying the states according to the degree of inter-party competition; and
b) to present a new measure that overcomes some of the problems encountered by the others. Again it must be emphasized that the utility of any such measure can only be evaluated in the context of the research objective it is designed to serve, provided, of course,
that they are valid and reliable, empirically. The new measure is, hopefully, a tool which is useful in clarifying our thinking about state political competition and explaining variations in state policy choices. For other purposes it may have only limited applicability, for still others none at all. The chapter which follows presents substantive data which bear on the inter-relationships among both measures of the political process, socioeconomic conditions, and policy outputs in the states.

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42 See the discussion of these terms on page 21 and in footnotes 38-40.
Appendix

Classifications of the American State Party Systems
Two-party
Washington, California, Idaho, Montana, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico, Nebraska, Minnesota, Wisconsin, Michigan, Missouri, Illinois, Indiana, Ohio, West Virginia, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts

Modified One-Party Democratic
Oklahoma, Tennessee, North Carolina, Kentucky

Modified One-Party Republican
Oregon, North Dakota, South Dakota, Kansas, Iowa, Pennsylvania, Maine, New Hampshire

One-Party Democratic
Texas, Arkansas, Louisiana, Mississippi, Alabama, Georgia, South Carolina, Virginia, Florida

One-Party Republican
Vermont

Joseph A. Schlesinger

Competitive

Cyclically Competitive
New York, Utah, Delaware, West Virginia

One-Party Cyclical
Republican: Nebraska, North Dakota, Rhode Island, Massachusetts, Minnesota
Democratic: New Jersey, Arizona, New Mexico

One-Party Predominant
Republican: Illinois, California, Michigan, Kansas, Maine, Pennsylvania, South Dakota, New Hampshire, Wisconsin, Iowa
Democratic: Kentucky, Montana, Missouri, Maryland, Tennessee, North Carolina

One-Party
Republican: Vermont
Democratic: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, South Carolina, Texas, Virginia

from: "A Two-Dimensional Scheme for Classifying States According to the Degree of Inter-Party Competition," American Political Science Review 50 (December, 1956): 1122.
V.O. Key, Jr.

**Strong Republican**
Wisconsin, Vermont, North Dakota, Maine, South Dakota, Michigan, Iowa, New Hampshire

**Less-Strong Republican**
Minnesota, Pennsylvania, Kansas

**Competitive**
Massachusetts, Illinois, New Jersey, Wyoming, Ohio

**Leaning Democratic**
Colorado, West Virginia, Idaho, Missouri, Nevada

Robert Colombiewski

One Party
Alabama, Arizona, Arkansas, Florida, Georgia, Louisiana, Maine, Mississippi, North Carolina, Oklahoma, South Carolina, Texas, Vermont, Virginia

Weak Minority Party
Iowa, Kansas, Kentucky, Maryland, New Mexico, North Dakota, Oregon, South Dakota, Tennessee, Utah, Washington, West Virginia, Wisconsin

Two Party

Joseph A. Schlesinger

The Range of Competition—Based upon the Degree of Spread among the Offices of a State

I. Narrowly focused states—maximum horizontal spread of 25%, maximum vertical spread of 20%
   Rhode Island, New Hampshire, Maine, Vermont, Utah, Pennsylvania, North Dakota, South Dakota, Nebraska, New Mexico

II. Cyclically elongated states—maximum horizontal spread of 25%, minimum vertical spread of 25%
    Connecticut, New York, Delaware, Indiana, West Virginia, Kentucky, Illinois, Missouri, Iowa, Kansas, Idaho, Colorado, Oregon

III. Medium-broad focus—approximately 30% spread along both axes
    Massachusetts, Michigan, Wisconsin, Arizona, New Jersey

IV. No focus—more than 40% spread along both axes
    Ohio, Maryland, Minnesota, Montana, Nevada, Wyoming, Washington, California

Rank Ordering

1. Delaware
2. Wyoming
3. Pennsylvania
4. Colorado
5. Illinois
6. Connecticut
7. Ohio
8. New Jersey
9. Massachusetts
10. Michigan
11. Indiana
12. Idaho
13. Maryland
14. Iowa
15. New York
16. Minnesota
17. California
18. Wisconsin
19. Washington
20. Utah
21. Oregon
22. New Mexico
23. Montana
24. Kentucky
25. Nevada
26. Missouri
27. West Virginia
28. South Dakota
29. North Dakota
30. Nebraska
31. Arizona
32. New Hampshire
33. Rhode Island
34. Oklahoma
35. Maine
36. Kansas
37. Tennessee
38. Texas
39. Virginia
40. Florida
41. Vermont
42. North Carolina
43. Louisiana
44. Arkansas
45. Alabama
46. South Carolina
47. Georgia
48. Mississippi

One-Party Democratic
South Carolina, Georgia, Louisiana, Mississippi, Texas, Alabama, Arkansas, Florida

Modified One-Party Democratic
Virginia, North Carolina, Tennessee, Oklahoma, Kentucky, Arizona, West Virginia, Maryland, New Mexico

Two-Party

Modified One-Party Republican
Wisconsin, New Hampshire, Iowa, Kansas, Maine, South Dakota, North Dakota, Vermont

Two-Party Issue-Oriented
Michigan, Wisconsin, Minnesota

Two-Party Job-Oriented
Ohio, Indiana, Illinois, Kentucky, Missouri, West Virginia, Maryland, Massachusetts

Bi-Factional One-Party
Georgia, Louisiana, North Carolina, Tennessee

Multi-Factional One-Party
Alabama, Arkansas, Florida, Mississippi, Texas, South Carolina

(These were the only states discussed and classified.)

David Pfeiffer

One-Party Democratic
Alabama, Arkansas, Florida, Georgia, Louisiana, Texas, Mississippi, South Carolina

Modified One-Party Democratic
North Carolina, Tennessee, Virginia

Weak Two-Party Leaning Toward the Democrats
Alaska, Arizona, Hawaii, Oklahoma, Rhode Island

Two-Party

Weak Two-Party Leaning Toward the Republicans
Kansas, Maine, Nebraska, North Dakota, South Dakota

Modified One-Party Republican
Vermont

One-Party Republican
None

I. Competitive Parties, much party voting in legislatures
   Connecticut, Massachusetts, Michigan, New Jersey, New York

II. Competitive parties, considerable party voting in
    legislatures, but not as much as in group I
    Delaware, Indiana, Ohio, Pennsylvania, Rhode Island

III. Competitive parties, moderate party voting in legis-
    latures
    Colorado, Hawaii, Illinois, Montana, Wisconsin

IV. Competitive parties, little party voting in legislatures
    Alaska, California, Maryland, Minnesota, Washington

V. Some competition, little party voting in legislatures
    Arizona, Nevada, New Mexico, Oregon, Wyoming

VI. Little competition, little party voting in legislatures
    Idaho, Kentucky, Missouri, Utah, West Virginia

VII. One party domination, party voting rare
    Iowa, Kansas, Maine, Oklahoma, New Hampshire

VIII. One party domination, more than in Group VII, and party
      voting equally rare
      Nebraska, North Dakota, South Dakota, Tennessee, Vermont
Duane Lockard (continued)

IX. No practical competition in intra-state politics, bi-factional division frequent
   Georgia, Louisiana, North Carolina, South Carolina, Virginia

X. No practical competition, multi-factional division frequent
   Alabama, Arkansas, Florida, Texas, Mississippi

CHAPTER IV
THE DATA ANALYZED

It is the purpose of this chapter to present and analyze the results of several correlation and regression analyses. They suggest associations among the variables and aid in testing the hypotheses which are explained below.

Variables

Two types of independent variables were employed—socioeconomic (SES), and political. The position of each of the nineteen states along five socioeconomic dimensions yields this first group of independent variables:

1. Wealth - median money income of families.
3. Adult Education - median school year completed for persons 25 years of age and older.
4. Urbanization - percent of population living in urban areas (according to U.S. Census definition of "urban area").
5. Industrialization - percent of labor force employed in occupations other than agriculture, fishing, and mining.

The method and rationale behind the new measure of inter-party competition was explained in detail in the previous chapter. To test the viability of this new measure, its explanatory utility is compared with that of the older method of measuring political competition in the states. In Chapter Three, this latter method was labeled "standard." These two measures are the political variables used in this study:

6. Standard Method - composite ipc index for the relevant years.
7. New Method - composite ipc index for the relevant years.

The dependent variables are five policy output measures. As indicated in Chapter One, the choice of output measures was influenced by the desire to provide an empirical test of Lowi's policy typology.

8. Total General Expenditures - per capita, for the relevant years.

9. Police Protection - number of police per 10,000 civilian population, for the relevant years.

10. Education - per pupil expenditures for those in average daily attendance, for the relevant years.

11. Public Welfare - per capita expenditures, for the relevant years.

12. Aid to Families with Dependent Children - average monthly payment per family for the relevant years.

Since there is usually a two year budgetary "lag," the effects of political competition in a given year--if important--will be reflected in output measures two years hence. This lag factor is taken into account. For example, 1958 political data were run against 1960 output data, 1964 political data against 1966 output data, etc. It should be noted also that since complete census data are produced only every ten years, the socioeconomic variables are from 1960 and 1970 census data. Output variables from 1960 - 67 were correlated with socioeconomic data taken from the 1960 census; output data from 1968-71 with data

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1This idea was discussed more fully in Chapter One.
from the 1970 census.

The output measures for the relevant years are the combined expenditures of state and local governments for the policies under consideration. Several scholars have contended that the proper units of analysis should be the states or the localities rather than the combination of the two. Sharkansky has stated:

The fusion of state and local government activities confuses the efforts of politically distinct units. The state-plus-local aggregate is artificial, and not the arena in which policymakers decide about the size of their budgets, the allocation of funds, or any other of numerous policy choices.2

Fry and Winters added that "there is a potential ecological problem in analyzing state-wide political, social, and economic indicators in relation to local output measures.3

In commenting on Dye's use of state-plus-local data4 Hofferbert argued that:

The political system variables (e.g., apportionment or party systems) that have been studied and

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found inconsequential for policy are all based on gubernatorial and legislative election returns, state legislative apportionment, etc. and yet such findings as Dye's or some which I have reported elsewhere use these indicators and compare them to policy measures which are substantially affected by aggregations of local decisions. And no indicators of local political system variables, have been included in these analyses of state and local policy.5

One line of response to these arguments is that "if the policy makers - at whatever level - are perceived as operating within an environment of finite demands and supports, it would follow that provision of services by local governments would alter the inputs into the state system."6

It would seem that, on balance, the arguments for using state (only) expenditure data as output measures weigh more heavily. State-plus-local data were employed in this study nonetheless. The reason for this stratagem is that the primary issue under consideration here is the viability of various measures of inter-party competition - specifically the "distribution of seats" measure and the measure proposed in the preceding chapter. The best way to compare the two would be to use both in empirical analyses while controlling for other variables. Since most of the other studies used state-plus-local expenditure data, that


6Ibid.
tactic was employed here also despite the fact that the use of state-only data is, theoretically, preferable. It should be emphasized that the utilization of state-plus-local data was employed for the purpose of comparison.  

Hypotheses

Four major hypotheses have guided this research.  

Hypothesis One: State financial effort in most policy areas is primarily a function of the economic development of the state.

This hypothesis is based on the findings of Dye and others who have found consistent positive relationships between economic development and state policy outputs. The extent and level of government services will vary according to how much a state can afford to spend as indicated by objective socioeconomic conditions.

Hypothesis Two: For those issues which bear on the have--have-not struggle, inter-party competition will exert an intervening independent influence between economic development and policy outputs.

7This rationale applies to some of the other variables as well. For example, median family income indicates the income distributions extant in the states. However, measures such as the per cent of people below the poverty line might reveal more subtle aspects of the social structures of the states. The former measure was selected, again, so as to narrow the differences between this and other studies to the different measures of Ipc.

8See the discussion of these studies which is contained in Chapter Two.

9Some rather interesting analyses of patterns and factors involved in "innovation" in state policy can be found in Andrew Cowart, "Anti-Poverty Expenditures in the American States: A Comparative Analysis," Midwest Journal of Political Science 13
This hypothesis provides a test of the Key theory.\textsuperscript{10} Political competition moderates the effects of economic development on policy, but only on redistributive issues. Since Aid to Families with Dependent Children and Public Welfare were selected as the redistributive issues for this study, it is on these policies that the effects of inter-party competition will be scrutinized most closely.

**Hypothesis Three:** The "new" measure of inter-party competition will exhibit stronger levels of association on the redistributive issues than will the "standard" measure.

In the preceding chapter it was argued that the theoretical basis of the new measure more adequately reflects the realities of politics in the states than do the more conventional measures. If this is true, and if the politics-policy linkage is a viable one, then the new measure should produce stronger levels of association with the policy variables than the older measure.

**Hypothesis Four:** The influence of the different independent variables will not be uniform across all categories of policy.

This hypothesis is addressed to the policy typology.\textsuperscript{11} The

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\textsuperscript{10}See Chapter One.

\textsuperscript{11}A discussion of the policy typology for this study and its underlying rationale was provided in Chapter One.

policy-making system can best be understood as an amalgm of policy sub-systems, each having its distinctive set of demand patterns, stakes, institutional foci, decisional methods, etc. It is reasonable to expect, therefore, that the influence of each independent variable in this study will vary from policy to policy. If such is found to be the case, the precise nature of the various policy sub-systems will be examined in some detail.

**Methodology**

All seven independent variables were run against each of the five policy measures (dependent variables). The design here was to test for the relative explanatory power of each of the variables, and all of them taken together. In another set of runs the two political variables only were run against the policy variables. The idea here was for a comparative test of each of the measures of ipc (inter-party competition). In a different series of runs each of the two ipc measures with the five SES variables were run against the policy variables. It was expected that this would provide some indication of how well the political variables--each taken separately--would fare against the economic development measures in explaining variations in state spending patterns.

Correlation and regression analyses were used to "describe the degree and direction of linear association between two vari-
ables, each of which is expressed in an interval scale."\(^{12}\) It is necessary in this analysis, however, to isolate the influence of each of the independent variables. For this purpose, the two programs yield different measures of association: the correlation program produces a partial correlation coefficient, and the regression program produces a beta weight. Blalock has explained the distinction:

Since the beta weights and partial coefficients represent somewhat different types of measures of association, they will not give exactly the same result although usually they will rank variables in the same order of importance. The partial correlation is a measure of the amount of variation explained by one independent variable after the others have explained all they could. The beta weights, on the other hand, indicate how much change in the dependent variable is produced by a standardized change in one of the independent variables when the others are controlled.\(^{13}\)

In other words, the partial indicates the amount of unexplained (by the other independent variables) variation explained by the isolated independent variable; the beta weight indicates the proportion of change in the dependent produced by an increment of one standard deviation unit of the independent variable. Stated very loosely: with a beta weight each independent variable gets an even chance, while the partial gives the isolated independent variable the opportunity to explain what is left over after the

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other independent variables have already taken their turns.

Peters has stated that "this (the use of beta weights) gives a better measure of the effects of competing explanatory variables than does the use of partial correlations." Support for this position can be found elsewhere. When considering the relative importance of the independent variables, therefore, reliance is placed upon the beta weights. Partial correlation coefficients also were obtained, however, primarily because these were used in most of the other state policy output research.

Data Analysis

Qualifying Factors. The primary concern in the pages which follow is to isolate the effect exerted by the independent variables on the dependent variables. But first it is necessary to examine the relationships which exist among the independent variables themselves. Should patterns exist among them, these patterns will clarify - and perhaps qualify - the relationships among the independent and dependent variables. Three of these relationships are explored below: the intercorrelation among


15See, for example, Hubert M. Blalock, Jr., Causal Inferences in Nonexperimental Research (Chapel Hill: University of North Carolina Press, 1964), pp. 50-51.

16For some of the reasons why partials rather than beta weights are usually employed see ibid., pp. 50-52.
the SES variables, among the SES and ipc variables, and between the two measures of ipc. A fourth concern, that of "incrementalism," is also considered below. Although this issue is addressed to the relationships among the dependent rather than the independent variables, it is dealt with here because it also acts as a qualifying factor in relation to the data analysis presented below.

The relationships among the five SES variables are depicted in Table 4.1. Generally, the relationships between the 1960 and 1970 data are similar. Income tends to be higher in the more industrialized areas. Population density, urbanization and industrialization are also positively associated with one another, although income is highly associated with only one of these three. Education is associated only with income, and only moderately so.

While several of these correlation coefficients are quite high, it is somewhat surprising that they are not higher. It is plausible to suggest at this preliminary juncture that for the most part each is tapping a different dimension of the economic development concept.

The correlation coefficients for the SES and ipc variables are listed in Table 4.2 Dye¹⁷ and others¹⁸ have contended that

<table>
<thead>
<tr>
<th>Year</th>
<th>Urbanization</th>
<th>Education</th>
<th>Density</th>
<th>Income</th>
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<td></td>
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<tr>
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<tr>
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<td>0.69</td>
<td>0.00</td>
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<td>0.52</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>1.00</td>
<td>0.33</td>
<td>0.48</td>
<td>0.38</td>
</tr>
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</table>

<table>
<thead>
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<th>Education</th>
<th>Density</th>
<th>Income</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>0.72</td>
<td>3.59</td>
</tr>
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</tr>
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<td></td>
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<td>0.27</td>
</tr>
</tbody>
</table>

Table 4.1: Correlation Coefficients: SES Variables
Table 4.2  Correlation Coefficients:  Standard and New Measures of IPC, and SES Variables

<table>
<thead>
<tr>
<th>Year</th>
<th>Income</th>
<th>Density</th>
<th>Educa.</th>
<th>Urbanization</th>
<th>Indus.</th>
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<tr>
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<tr>
<td>1962</td>
<td>.56</td>
<td>.37</td>
<td>.18</td>
<td>.40</td>
<td>.59</td>
</tr>
<tr>
<td>1964</td>
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<td>-.23</td>
<td>.24</td>
<td>-.05</td>
<td>-.30</td>
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<tr>
<td>1966</td>
<td>.30</td>
<td>-.33</td>
<td>.42</td>
<td>.41</td>
<td>.32</td>
</tr>
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<td>1968</td>
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<td>.21</td>
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<th>Density</th>
<th>Educa.</th>
<th>Urbanization</th>
<th>Indus.</th>
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</thead>
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<td>-.06</td>
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<tr>
<td>1960</td>
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</tr>
<tr>
<td>1962</td>
<td>.21</td>
<td>.44</td>
<td>-.19</td>
<td>.16</td>
<td>.30</td>
</tr>
<tr>
<td>1964</td>
<td>-.27</td>
<td>-.19</td>
<td>.05</td>
<td>-.07</td>
<td>-.25</td>
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<tr>
<td>1966</td>
<td>.20</td>
<td>-.38</td>
<td>.27</td>
<td>.03</td>
<td>.07</td>
</tr>
<tr>
<td>1968</td>
<td>.40</td>
<td>-.05</td>
<td>.09</td>
<td>.26</td>
<td>.46</td>
</tr>
</tbody>
</table>
although IPC and policy are highly associated with one another, these relationships are reduced drastically when SES factors are held constant. The former associations, they argued, are mere statistical artifacts of the relationships among SES and IPC. Political variables have high simple r's only because they are highly associated with the SES variables. No support for this finding can be gleaned from the data presented here. Most of the simple r's are quite low, and several are negative. The relationship between IPC and SES is moderately high only for the 1962 standard measure, and only for the income and industrialization variables. The relationships between SES and the new measure are even weaker - all the simple r's are low, and half are negative. It would seem, therefore, that the SES and IPC variables are two distinct sets.

The correlation coefficients for the two IPC variables are presented in Table 4.3 The simple r's are quite high for three of the first four years, but drop off somewhat toward the end. It will be recalled from the preceding chapter that competition for the governorship was computed identically for both measures. While this to some extent explains the high levels of association in the early years, it makes it more difficult to account for the drop-off in the later years. An inspection of the election statistics, however, reveals an interesting trend in these latter years. It appears that competition in the individual races has increased somewhat, though not quite enough to affect significantly
the outcomes of the races and hence the distribution of seats in the state legislatures. There are fewer uncontested elections and fewer lopsided elections, but the minority parties have yet to acquire enough support to alter the actual outcomes of the elections. This is a very significant trend. Unfortunately the political data presented here span only six points in time within a ten year interval and, therefore, do not permit conclusions on this trend to be made with much confidence. It does seem, however, that the states are becoming more competitive generally. And it should be noted that the new but not the standard measure was capable of revealing this apparent trend. Nonetheless, it is important to be aware of the strong relationship between the two ipc measures, and its significance for the data analysis presented below.

Table 4.3 Correlation Coefficients: Standard and New Measures of Inter-Party Competition

<table>
<thead>
<tr>
<th>Year</th>
<th>r</th>
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</thead>
<tbody>
<tr>
<td>1958</td>
<td>.94</td>
</tr>
<tr>
<td>1960</td>
<td>.92</td>
</tr>
<tr>
<td>1962</td>
<td>.75</td>
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<tr>
<td>1964</td>
<td>.90</td>
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<tr>
<td>1966</td>
<td>.66</td>
</tr>
<tr>
<td>1968</td>
<td>.62</td>
</tr>
</tbody>
</table>

19 It will be recalled from Chapter Three that the range among the states was smaller for the new measure. This could be a reflection of some of the ideas presented above.
Table 4.4 Correlation Coefficients: Expenditures for one year with expenditures for the next (Incrementalism)

<table>
<thead>
<tr>
<th></th>
<th>Total General</th>
<th>Police Protection</th>
<th>Education</th>
<th>Public Welfare</th>
<th>ADC Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960-61</td>
<td>.94</td>
<td>.97</td>
<td>.96</td>
<td>.99</td>
<td>.96</td>
</tr>
<tr>
<td>1962-63</td>
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<td>.97</td>
<td>.96</td>
<td>.98</td>
<td>.98</td>
</tr>
<tr>
<td>1964-65</td>
<td>.98</td>
<td>-.16</td>
<td>.14</td>
<td>-.03</td>
<td>-.09</td>
</tr>
<tr>
<td>1966-67</td>
<td>.95</td>
<td>.99</td>
<td>.97</td>
<td>.95</td>
<td>.98</td>
</tr>
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<td>1968-69</td>
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<tr>
<td>1970-71</td>
<td>.83</td>
<td>.99</td>
<td>.94</td>
<td>.85</td>
<td>.97</td>
</tr>
</tbody>
</table>

The final qualifying factor to be considered here concerns "incrementalism." Sharkansky has argued persuasively that the most important clue as to how much a state will spend for a governmental service next year is how much it has spent (or appropriated) this year.\(^{20}\) States tend to budget incrementally from a base point, with current expenditures differing from past in only small units (or increments). Table 4.4 presents the correlation coefficients for the expenditure levels of the five policies.\(^{21}\)

\(^{20}\) See, for example, Ira Sharkansky, *Spending in the American States* (Chicago: Rand McNally and Company, 1968). This and other related works were discussed in some detail in Chapter Two.

\(^{21}\) It is readily apparent that results for 1965 are radically different from other years. This year produced anomalous results.
There is ample support for Sharkansky's hypothesis in these data. Most of the simple r's were well above .9. This suggests that the incremental phenomenon sets the broad parameters within which the independent variables exert their influence.

The four sets of relationships discussed above do not necessarily detract from the analysis presented below. They were included to pinpoint some of the subtleties in the data which should be borne in mind when examining the major findings of this study.

Major Findings: Before the data analysis is undertaken, a word is in order concerning the sample size. Since, as has been noted previously, political data could be assembled for only nineteen states, the sample size is rather small. The results of this study, therefore, are necessarily of an exploratory nature. Because of the small sample size, measures of association had to be quite high for them to pass the usual significance test (.05). In this report, emphasis is placed upon apparent patterns and trends in the data, rather than on significance tests. Should the new measure of IPC reveal itself to be a potentially useful explanatory tool, more stringent statistical tests will be imposed upon it in future research.

throughout the data. It was, therefore, excluded from the data analysis since there was no apparent (political) reason for this occurrence.
<table>
<thead>
<tr>
<th>Year</th>
<th>Standard Error</th>
<th>New Income</th>
<th>Education</th>
<th>Urbanization</th>
<th>Industrial</th>
<th>Home Ownership</th>
<th>Retail</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-0.31</td>
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</tr>
<tr>
<td>1962</td>
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<td>0.45</td>
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<td>-0.33</td>
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<td>1964</td>
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</tr>
<tr>
<td>1965</td>
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<td>-0.18</td>
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<td>0.41</td>
<td>-0.18</td>
<td>-0.18</td>
</tr>
<tr>
<td>1966</td>
<td>-0.17</td>
<td>-0.17</td>
<td>0.40</td>
<td>-0.38</td>
<td>0.40</td>
<td>-0.38</td>
<td>0.40</td>
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</tr>
<tr>
<td>1967</td>
<td>-0.16</td>
<td>-0.16</td>
<td>0.39</td>
<td>-0.39</td>
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<tr>
<td>1968</td>
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<td>-0.15</td>
<td>0.38</td>
<td>-0.40</td>
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<td>-0.40</td>
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<tr>
<td>1969</td>
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<td>-0.14</td>
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<td>-0.41</td>
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<td>1970</td>
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<td>-0.13</td>
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<td>-0.44</td>
<td>0.34</td>
<td>-0.11</td>
<td>-0.11</td>
</tr>
</tbody>
</table>

Table 4.5: Correlation coefficients: All seven independent variables & gale relative to general expenditures.
Total General Expenditures Per Capita. An inspection of Table 4.5 reveals that all seven independent variables—taken together—account for much of the variation in state spending patterns for this policy. The coefficients of determination are, with one exception (1971), .83 or better. This means that (with one exception) the independent variables explain at least 70% of the variation on this policy variable. It would seem, then, that the independent variables chosen for this analysis contain many of the major factors affecting state spending patterns.

Table 4.5 also lists the correlation coefficients for the seven independent variables. Education is the strongest variable here. Although the influence of this variable decreased from 1968 onward, from 1960-1967 its simple r's were quite high. The simple r's in the earlier years, moreover, are all significant at the .05 level. While the highest scores for median family income are not as high as those for education, they are more consistent. All but two are significant at .05. Almost all of the scores for the other three SES variables are low negative. Both ipc variables exhibit an increasingly positive trend, although the simple r's for both are quite low.

Table 4.6 presents the beta weights for the seven independent variables. Interestingly, education—which showed the highest simple r's—exhibits beta weights which are quite low. The highest beta weight was only .46. Income remained quite high; indeed, its beta weights are even more impressive. The range is from 1.22
<table>
<thead>
<tr>
<th>Year</th>
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<th>12</th>
<th>25</th>
<th>66</th>
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<td>40</td>
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<td>73</td>
<td>73</td>
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<tr>
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<td>16</td>
<td>66</td>
<td>1961</td>
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<tr>
<td>1981</td>
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<td>70</td>
<td>28</td>
<td>37</td>
<td>14</td>
<td>68</td>
<td>1960</td>
</tr>
</tbody>
</table>

Table 4.6: Beta weights: All seven independent variables against total general expenditures.
to .49. While the beta weights are fairly high throughout, there seems to be a clear trend in which the income variable acquires more importance in the later years. Urbanization and industrialization show a few rather high negative beta weights. They exhibit no apparent trend, however, and since their other scores are low one could only speculate on the significance of the high negative scores. Of the ipc variables, only the standard measure produces high positive scores--although not consistently so. There was a weak pattern of progressively larger positive scores for the standard measure, although this trend is reversed in the final two years. The new ipc measure, with the exception of one fairly high negative, did not do well at all.

The question arises immediately as to why the scores for the political variables are so different when they are so highly correlated with one another. It appears that when both are in the same equation, their effects are depressed by each other. The new measure suffers more than this "reciprocal effect" because my variable list was set up such that the computer always read the standard measure first. This effect can be seen throughout the data. To compensate for this "technical" effect, each of the ipc variables was run separately with the SES variables (see Tables 4.7-8). This strategem, however, did not alter either the simple r's or the beta weights for either ipc variable to any great extent.
<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rate</th>
<th>Irrigation</th>
<th>Industrial Growth</th>
<th>Urbanization</th>
<th>Education Expenditure</th>
<th>Industrial Expenditure</th>
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<td>0.18</td>
<td>0.78</td>
<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td>1961</td>
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<td>0.86</td>
<td>0.18</td>
<td>0.78</td>
<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td>1962</td>
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<td>0.86</td>
<td>0.18</td>
<td>0.78</td>
<td>0.25</td>
<td>0.27</td>
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<tr>
<td>1963</td>
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<td>0.86</td>
<td>0.18</td>
<td>0.78</td>
<td>0.25</td>
<td>0.27</td>
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<td>1964</td>
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<td>0.86</td>
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</tr>
<tr>
<td>1967</td>
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<td>0.86</td>
<td>0.18</td>
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<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td>1968</td>
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<td>0.86</td>
<td>0.18</td>
<td>0.78</td>
<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td>1969</td>
<td>0.69</td>
<td>0.86</td>
<td>0.18</td>
<td>0.78</td>
<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td>1970</td>
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<td>0.86</td>
<td>0.18</td>
<td>0.78</td>
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<td>0.27</td>
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<tr>
<td>1971</td>
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<td>0.86</td>
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<td>0.78</td>
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<tr>
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<td>0.86</td>
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<td>0.78</td>
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<tr>
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<td>0.86</td>
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<td>0.78</td>
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<td>0.78</td>
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<tr>
<td>1980</td>
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<td>0.86</td>
<td>0.18</td>
<td>0.78</td>
<td>0.25</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Note: Beta weights: standard tpc measure and SES agnostic total General Expenditures.
<table>
<thead>
<tr>
<th>Year</th>
<th>IPCE</th>
<th>Income</th>
<th>Decency</th>
<th>Education</th>
<th>Industrial</th>
<th>Annex 2</th>
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</thead>
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<tr>
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<td>7.0</td>
<td>-10.80</td>
<td>18.01</td>
<td>69.09</td>
<td>1967</td>
</tr>
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<td>11.0</td>
<td>-35.5</td>
<td>1.36</td>
<td>0.00</td>
<td>1966</td>
</tr>
<tr>
<td>1978</td>
<td>0.88</td>
<td>11.0</td>
<td>-35.6</td>
<td>31.11</td>
<td>7.77</td>
<td>1965</td>
</tr>
<tr>
<td>1982</td>
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<td>-0.03</td>
<td>-59.9</td>
<td>0.35</td>
<td>0.00</td>
<td>1964</td>
</tr>
<tr>
<td>1984</td>
<td>0.96</td>
<td>14.1</td>
<td>-4.44</td>
<td>0.10</td>
<td>-3.66</td>
<td>1963</td>
</tr>
<tr>
<td>1984</td>
<td>0.96</td>
<td>14.1</td>
<td>-4.44</td>
<td>0.10</td>
<td>-3.66</td>
<td>1963</td>
</tr>
<tr>
<td>1984</td>
<td>0.96</td>
<td>14.1</td>
<td>-4.44</td>
<td>0.10</td>
<td>-3.66</td>
<td>1963</td>
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<td>1984</td>
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<td>14.1</td>
<td>-4.44</td>
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<td>1963</td>
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<tr>
<td>1984</td>
<td>0.96</td>
<td>14.1</td>
<td>-4.44</td>
<td>0.10</td>
<td>-3.66</td>
<td>1963</td>
</tr>
<tr>
<td>1984</td>
<td>0.96</td>
<td>14.1</td>
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<td>0.10</td>
<td>-3.66</td>
<td>1963</td>
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</table>

Table 4.8: Here are weights for IPCE measure and SES aggregate total General Expenditures.
Table 4.9 Correlation coefficients: standard and new ipc measures against total general expenditures

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
<th>R</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>-.20</td>
<td>-.30</td>
<td>.37</td>
<td>.14</td>
</tr>
<tr>
<td>1961</td>
<td>-.27</td>
<td>-.29</td>
<td>.29</td>
<td>.07</td>
</tr>
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<td>-.01</td>
<td>-.19</td>
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</tr>
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<td>-.01</td>
<td>-.18</td>
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<td>.20</td>
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<td>.11</td>
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<td>1966</td>
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<td>.03</td>
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<td>.11</td>
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<tr>
<td>1967</td>
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<td>.09</td>
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<td>1970</td>
<td>.48</td>
<td>.16</td>
<td>.52</td>
<td>.27</td>
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<tr>
<td>1971</td>
<td>.36</td>
<td>.13</td>
<td>.39</td>
<td>.15</td>
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</table>

To estimate the comparative power of each of the ipc measures, runs were made with only these two variables in the equation (see Table 4.9). The range of the R²'s was from .27 in 1970 to .09 in 1961. Apparently, the two ipc variables do not go very far in accounting for changes in the dependent variables. The data suggest that the standard measure works better, although its simple r's are still quite low. The beta weights are a bit more revealing (see Table 4.10). With one
exception, all the standard measure's scores are positive, while those for the new measure are negative—once again the reciprocal effect seems to be at work. In some years the standard measure's scores are higher; in other years the new measure's scores are higher (forgetting the "direction" of them for the time being). It seems that the two measures are associated with

Table 4.10 Beta weights: standard and new measures of ipc against total general expenditures

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
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<td>-.91</td>
</tr>
<tr>
<td>1961</td>
<td>.05</td>
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<tr>
<td>1962</td>
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<td>-1.14</td>
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<tr>
<td>1963</td>
<td>1.02</td>
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<td>-.47</td>
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<tr>
<td>1965</td>
<td>.41</td>
<td>-.48</td>
</tr>
<tr>
<td>1966</td>
<td>.78</td>
<td>-.73</td>
</tr>
<tr>
<td>1967</td>
<td>.28</td>
<td>-.30</td>
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<td>1969</td>
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<td>1970</td>
<td>.63</td>
<td>-.24</td>
</tr>
<tr>
<td>1971</td>
<td>.46</td>
<td>-.16</td>
</tr>
</tbody>
</table>
one another to such an extent here that it is not possible to
decide which one works better.\textsuperscript{22}

\textbf{Police Protection.} Table 4.11 indicates that the cumulative
effects of the seven independent variables explain most of the
variation in the policy variables. As much as 82\% (1967) of
this variation can be attributed to the independent variables.
The lowest $R^2$ is .64 in 1963, and this is still moderately
high.\textsuperscript{23}

The correlation coefficients for the seven independent
variables are depicted in Table 4.11. The correlation coefficients
are fairly high for all of the SES variables except education. Of
these, urbanization clearly is the strongest. The highest $r$ was
.84 (1960), the lowest being .71 (1967). Further, all of these
are significant at the .05 level. Industrialization is also
quite high, although the scores here are a bit lower toward the
end (nine are significant at the .05 level). Median income
again does rather well, but not as well as the first two. Popu-
lation density shows some moderately high positive scores at
the beginning, but scores for the later years drop off somewhat.
There is a progressively upward trend for education, although

\textsuperscript{22}The relationships indicated by the partial correlation
coefficients here do not alter what has been stated above. The
discussion is based on the beta weights, for the reasons given
above.

\textsuperscript{23}See footnote 21 for the reasons for excluding data for
1965 from this analysis.
the highest score is still only .37 (1971). Neither political variable does as well as the SES variables (except education), but the scores for the standard measure for the last four years are all significant at the .05 level.

The beta weights overrule these preliminary statements (see Table 4.12). The standard ipc measure shows the highest beta weights, three of these being very high (1961, 1966, 1967). The beta weights are not, however, consistently high throughout—in fact, three of them are quite low. At this point there would seem to be no explanation for these conflicting tendencies. Urbanization once again is the strongest SES variable on this policy. While none of the beta weights here is as high as the highest for the standard ipc measure, and while there are a few lower scores, urbanization would seem to be the most consistently high independent variable for police protection. Median family income does moderately well, although much less so than urbanization and the standard measure. The beta weights for industrialization differ substantially from the correlation coefficients. While the simple r's were quite high, the beta weights are mostly all negative, some of these negative being moderately strong. This could be due to the high correlation of industrialization with urbanization (.69).

The beta weights for population density are all low (positive and negative), in contrast to its higher simple r's. Density is also correlated highly with urbanization (.61). The beta
<table>
<thead>
<tr>
<th>Year</th>
<th>Income</th>
<th>Population</th>
<th>New England</th>
<th>New Standard</th>
<th>Interaction</th>
<th>Median Median Null</th>
<th>Beta Weights: 71 Seven Independent Variables Against Police Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>3.2</td>
<td>0.9</td>
<td>0.9</td>
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<td>0.9</td>
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<tr>
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<td>0.9</td>
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<tr>
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<td>0.9</td>
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<tr>
<td>1964</td>
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<td>0.9</td>
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<tr>
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<td>1962</td>
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<tr>
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<tr>
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<td>0.9</td>
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</tr>
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</table>

Table 4.12 Beta Weights: 71 Seven Independent Variables Against Police Protection
Weights for education are all low (negative), as were the simple r's. The beta weights for the new ipc measure are all negative, and some are quite high. An examination of Table 4.12 reveals that the reciprocal effect between the two ipc measures is at work here -- the higher (or lower) the beta weight for the standard measure the higher (or lower) the beta weight for the new measure, except the direction is positive for the standard measure and negative for the new measure.

Notice (Table 4.13-14) that when the two ipc variables are run one at a time with the SES variables against policy, there are some significant changes in the beta weights. The scores for the new ipc measure remain low, and the beta weights for the standard measure are reduced considerably. Simultaneously, the beta weights for urbanization are a bit higher; changes in the other variables are insignificant. Since all of the beta weights for urbanization are significant at the .05 level, it is plausible to conclude -- given the conflicting scores for the standard measure on these two runs -- that urbanization is the key variable for explaining variations in policy protection.

When only the two ipc variables are entered in the equation, the R^2's are reduced considerably (see Table 4.15). With all seven independent variables in the equation the range was from .82 to .64, with only the two political variables the range is now from .38 to .15. Once again the standard measure exhibits
<table>
<thead>
<tr>
<th>Year</th>
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<th>Education</th>
<th>Urbanization</th>
<th>Density</th>
<th>Income</th>
<th>Standard Error</th>
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<tbody>
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<td>0.39</td>
<td>0.39</td>
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<tr>
<td>1969</td>
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<td>1.3</td>
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<td>0.39</td>
<td>0.39</td>
<td>0.39</td>
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<tr>
<td>1968</td>
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<td>1.3</td>
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<td>0.39</td>
<td>0.39</td>
<td>0.39</td>
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<tr>
<td>1967</td>
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<td>0.39</td>
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</tbody>
</table>

Table 4.13: Beta weights, standard & SE's as actual police protection
Table 4.15 Correlation coefficients: standard and new ipc measures against police protection

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
<th>R</th>
<th>R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
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<td>.40</td>
<td>.16</td>
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<tr>
<td>1961</td>
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<td>-.25</td>
<td>.39</td>
<td>.15</td>
</tr>
<tr>
<td>1962</td>
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<td>.05</td>
<td>.47</td>
<td>.22</td>
</tr>
<tr>
<td>1963</td>
<td>.25</td>
<td>.08</td>
<td>.46</td>
<td>.21</td>
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<tr>
<td>1964</td>
<td>.34</td>
<td>.10</td>
<td>.41</td>
<td>.17</td>
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<tr>
<td>1965</td>
<td>-.23</td>
<td>-.25</td>
<td>.26</td>
<td>.07</td>
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<tr>
<td>1966</td>
<td>.24</td>
<td>.02</td>
<td>.60</td>
<td>.36</td>
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<tr>
<td>1967</td>
<td>.22</td>
<td>-.05</td>
<td>.62</td>
<td>.38</td>
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<tr>
<td>1968</td>
<td>.50</td>
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<td>.33</td>
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<tr>
<td>1969</td>
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<td>.11</td>
<td>.62</td>
<td>.38</td>
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<td>1970</td>
<td>.48</td>
<td>.24</td>
<td>.49</td>
<td>.24</td>
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<tr>
<td>1971</td>
<td>.48</td>
<td>.20</td>
<td>.49</td>
<td>.24</td>
</tr>
</tbody>
</table>

higher correlation coefficients. While the simple r's for both are mostly low, there is an upward trend for both in the last four years. This pattern is evident particularly for the standard measure, with these last four scores all being significant at the .05 level. Once again, a somewhat different pattern emerges from an examination of the beta weights (see Table
4.16). Here, the reciprocal effect is again at work—beta weights for the standard measure being positive, and negative for the new measure. It should be reiterated that this must be a technical effect, since the two measures are highly correlated with one another. If the direction of association is ignored for the time being, it can be seen that for some years

Table 4.16 Beta weights: standard and new ipc measures against police protection

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>.95</td>
<td>-1.11</td>
</tr>
<tr>
<td>1961</td>
<td>.84</td>
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<td>1966</td>
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<td>1969</td>
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<td>1970</td>
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<tr>
<td>1971</td>
<td>.57</td>
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</table>
the standard measure is stronger, the new measure being stronger in others, with the standard measure holding a slight edge.

For the two policies considered to this point, the effects of the SES variables are clearly superior, with the standard measure being the stronger of the two ipc variables.

Education. The explanatory power exerted by the seven independent variables on per pupil expenditures for education, while weaker than for the first two policies, is still quite strong. The range of the $R^2$'s is from .70 (1971) to .58 (1960). While the highest and lowest $R^2$'s are for the last and first year respectively, no discernible trend exists (see Table 4.17).

The correlation coefficients listed in Table 4.17 show income to be clearly the strongest variable for this policy. The simple $r$'s range from .76 (1961) to .62 (1970), and all are significant at the .05 level. The small range indicates the consistency of income's effect on education. With eight scores passing the .05 significance test, industrialization also does consistently well although at levels lower than those for income (.50 to .40). Somewhat surprisingly education as an independent variable is not at all highly associated with education as a dependent variable—the highest simple $r$ between the two is .46 (1961). The standard ipc measure does moderately well half the time, very poorly the other half. With one exception, the scores for the new ipc measure are quite low.
<table>
<thead>
<tr>
<th>Year</th>
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<th>Health</th>
<th>Education</th>
<th>Income</th>
<th>New</th>
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<td>0.08</td>
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<td>0.72</td>
<td>0.76</td>
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<td>0.08</td>
</tr>
</tbody>
</table>

Table 4.17 Correlation coefficients of seven independent variables against education.
Several of the beta weights for median family income are quite high (see Table 4.18); it is perhaps the strongest variable for this policy. However, the beta weights are not high throughout—the scores decrease considerably for the last four years. The scores for population density are very low for the years 1960-1967, but are very high for the final four years. It could be that income and density are part of some larger factor which manifests itself through the income variable for some years and the density variable in others. It will be recalled, however, that the correlation between these two was only .28 for the 1960 data, and .38 for the 1970 set. The 1970 data were used for the last four years, and these were the years for which high scores for density were obtained. Still, a .38 simple r is not that high. Perhaps it is best to defer judgment on this possible relationship until the other policies are examined.

There is considerable range in the beta weights for urbanization (+.446 -- .809). Although only a few of the beta weights are of any magnitude, it may be significant that these all fall toward the end and are negative in direction. It would be dangerous to generalize on the basis of these few scores, however, since the others are quite low. Industrialization, which had rather high simple r's, shows mostly low negative beta weights. Apparently, the high correlation coefficients were merely a product of the high correlation of this variable with
<table>
<thead>
<tr>
<th>Year</th>
<th>Income Poverty</th>
<th>Education</th>
<th>Urban</th>
<th>Population Density</th>
<th>Median Income</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>62</td>
<td>23</td>
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<td>1963</td>
<td>76</td>
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<td>65</td>
<td>1964</td>
<td>76</td>
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<td>65</td>
<td>1967</td>
<td>76</td>
<td>96</td>
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</tbody>
</table>

Table 4.18 Beta weights: all seven independent variables regard education
the other SES measures. It will be recalled that the correlation between industrialization and income was .72 for the 1960 data and .72 for the 1970 set also. The education variable produced low positive and negative beta weights, which parallels its scores for the correlation coefficients.

The beta weights for the ipc variables are somewhat confusing. The reciprocal effect is again apparent, although this time the standard measure benefits from it in some years, and the new measure benefits in other years. For example, in 1961 the beta weights for the standard and new measures are -1.19 and +1.38. But in 1966 they are +1.05 for the standard measure and -.73 for the new measure. Taken together, the ipc variables show the highest and lowest beta weights. To complicate the picture further, the beta weights are not consistently high positive or negative; there are several low scores also. It would seem that some relationship is at work here; the precise nature of it defies explanation at this juncture.

When only one ipc variable at a time is run with the SES variables against the policy measures, a somewhat clearer pattern emerges (see Tables 4.19-20). The standard measure appears to work better on this policy. Although considerably lower than income and density, it is the strongest variable after these two. The highest beta weights for the standard measure occur in the last four years, a pattern similar to that for density. While this suggests high correlation between the two, an inspec-
<table>
<thead>
<tr>
<th>Year</th>
<th>R²</th>
<th>Industrialization</th>
<th>Urbanization</th>
<th>Education</th>
<th>Density</th>
<th>Income</th>
<th>New X</th>
<th>Year</th>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td>1961</td>
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</table>

Table 4.20: Beta weights: new X to measure and S25 against education.
Table 4.21  Correlation coefficients: standard and new ipc measures against education

<table>
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<tr>
<th>Year</th>
<th>Standard ipc</th>
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<th>R</th>
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<td>.10</td>
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<td>.35</td>
<td>.12</td>
</tr>
<tr>
<td>1968</td>
<td>.17</td>
<td>.11</td>
<td>.17</td>
<td>.03</td>
</tr>
<tr>
<td>1969</td>
<td>.15</td>
<td>.12</td>
<td>.15</td>
<td>.02</td>
</tr>
<tr>
<td>1970</td>
<td>.53</td>
<td>.33</td>
<td>.53</td>
<td>.28</td>
</tr>
<tr>
<td>1971</td>
<td>.46</td>
<td>.34</td>
<td>.47</td>
<td>.22</td>
</tr>
</tbody>
</table>

tion of Table 4.20 shows that such an inference is unwarranted, for the correlation between these two variables is quite low -- from +.365 to -.328. The new measure does not fare well on this run either. While three of the scores are moderately high, the rest are quite low.
The two political variables are not able to account for much of the variation in expenditures for education when only they are entered in the equation (see Table 4.21). While all seven independent variables were able to account for as much as 70% of the policy variation, the highest $R^2$ for the two ipc measures is .41. While this higher extreme is comparatively strong the lower extremity drops to .02, in contrast to the .58 obtained when all seven independent variables are in the equation (see Table 4.17). The correlation coefficients reveal the standard measure to be the stronger of the two once again.

When the beta weights are scrutinized (see Table 4.22), the reciprocal effect is again observed. And once again, the standard measure shows the higher scores. The beta weights, however, form no clear pattern—several are quite high, but a few are rather low. The range is from +1.42 to -.53. Generally the scores for the standard measure are higher (disregarding direction). It would seem that for the first three policies considered, the standard measure of political competition is a more useful tool for explaining variations in state policy choices. This statement must be qualified, however, in light of the high level of association between the two ipc measures.

Public Welfare. The seven independent variables are least successful in explaining state variations in spending for public
Table 4.22 Beta weights: standard and new ipc measures against education

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>-.47</td>
<td>.47</td>
</tr>
<tr>
<td>1961</td>
<td>-.53</td>
<td>.57</td>
</tr>
<tr>
<td>1962</td>
<td>1.42</td>
<td>-1.00</td>
</tr>
<tr>
<td>1963</td>
<td>1.21</td>
<td>-.79</td>
</tr>
<tr>
<td>1964</td>
<td>.51</td>
<td>.16</td>
</tr>
<tr>
<td>1965</td>
<td>.33</td>
<td>-.47</td>
</tr>
<tr>
<td>1966</td>
<td>.70</td>
<td>-.70</td>
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<tr>
<td>1967</td>
<td>.80</td>
<td>-.78</td>
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<td>.13</td>
<td>.03</td>
</tr>
<tr>
<td>1970</td>
<td>.53</td>
<td>.00</td>
</tr>
<tr>
<td>1971</td>
<td>.41</td>
<td>.09</td>
</tr>
</tbody>
</table>

welfare. Table 4.23 shows that for no year are the variables able to account for even half the variation in this policy.

For the first three policies the $R^2$s were usually at least .60 and most were considerably higher; the highest $R^2$ attained for public welfare was .48. And the mean of the $R^2$s is .31, which is rather low. The lowest $R^2$ is .21 in 1971.

The correlation coefficients from Table 4.23 reveal a slight progressively upward positive trend for all the SES variables except education. It can be observed also, however, that
for the most part these simple r's never reach very high levels so speculation on a possible trend here must be made with care. Urbanization shows the highest correlation coefficients. Its scores are not very high in the early years, but they do get stronger toward the end. The same pattern is discernible for density, income, and industrialization. This possible trend is scrutinized more closely in the discussion of the beta weights below. Somewhat surprisingly, median income shows the lowest simple r's of all five SES variables except education. While its scores are consistent with the trend for the other variables, only one score is above .30. The scores for 1960-1964 are, moreover, negative. This is in marked contrast to the comparatively high explanatory power of this variable which was seen for the first three policies. Neither ipc variable produced high simple r's, the scores being rather low positive and negative.

The apparent upward trend for the SES variables disappears when the more powerful beta weights are examined (see Table 4.24). The education and density variables show all low positive and negative scores. Urbanization does only a little better. There is something of a trend for the income variable, but it differs considerably from the one manifested by its correlation coefficients. The beta weights for the income variable are very high in the early years, and the strength of this negative polarity decreases. Per capita expenditures for public welfare were clearly associated negatively in the beginning, but this
<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Income</th>
<th>Median</th>
<th>Education</th>
<th>Urbanization</th>
<th>Industry Standard</th>
<th>Hexagon Migration</th>
<th>Standard Hexagon Mean</th>
</tr>
</thead>
</table>

Table 4.4: Beta weights: all seven independent variables against public welfare
Table 4.25 Correlation coefficients: standard and new ipc measures against public welfare

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
<th>R</th>
<th>R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>-.28</td>
<td>.37</td>
<td>.42</td>
<td>.17</td>
</tr>
<tr>
<td>1961</td>
<td>-.27</td>
<td>-.37</td>
<td>.44</td>
<td>.19</td>
</tr>
<tr>
<td>1962</td>
<td>.27</td>
<td>.30</td>
<td>.30</td>
<td>.09</td>
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<td>1963</td>
<td>.18</td>
<td>.19</td>
<td>.19</td>
<td>.04</td>
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<td>1964</td>
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<td>.00</td>
<td>.05</td>
<td>.00</td>
</tr>
<tr>
<td>1965</td>
<td>-.41</td>
<td>-.30</td>
<td>.41</td>
<td>.17</td>
</tr>
<tr>
<td>1966</td>
<td>.04</td>
<td>.04</td>
<td>.04</td>
<td>.00</td>
</tr>
<tr>
<td>1967</td>
<td>.08</td>
<td>.05</td>
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<td>.01</td>
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<td>1968</td>
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<td>-.06</td>
<td>.32</td>
<td>.10</td>
</tr>
<tr>
<td>1969</td>
<td>.04</td>
<td>-.34</td>
<td>.48</td>
<td>.23</td>
</tr>
<tr>
<td>1970</td>
<td>.18</td>
<td>.03</td>
<td>.21</td>
<td>.05</td>
</tr>
<tr>
<td>1971</td>
<td>.15</td>
<td>.02</td>
<td>.18</td>
<td>.03</td>
</tr>
</tbody>
</table>

relationship disappears for 1967 onward. It is a general comment on the explanatory power of all the independent variables for this policy when they are only a few high beta weights, and these are negative. Industrialization exerts the strongest positive influence, but only sporadically. Beta weights for 1962-
1964 are .70, .62, and .84 respectively. The rest of the scores are lower positive with two low negatives.

Neither political variable does well, each producing low positive and negative beta weights. These results are not altered significantly when only one of the ipc variables is run alternately with the SES variables against the dependent variable.

When the two ipc variables are run together, they can account for little of the variation in the dependent variable. Table 4.25 shows that the highest $R^2$ is .23 (1969), the smallest being a rather insignificant .001 (1966). The correlation coefficients are all quite low positive and negative, with the new measure having a slightly larger range standard: $+.27$ -- $-.28$; new: $+.37$ -- $-.37)$. The beta weights (see Table 4.26) once again reveal the reciprocal effect. Disregarding direction for the time being, it can be seen that the beta weights for the new measure are comparatively higher. However the mixture of positive and negative, and low and high scores makes any inference based on these scores very tenuous. The low $R^2$'s here serve to emphasize this statement.

It is on this public welfare policy that the seven independent variables have performed worst. The explanation for state variations in spending for this policy must be sought elsewhere. Aid to Families with Dependent Children. The seven independent variables are rather successful in explaining variations in this
Table 4.26 Beta weights: standard and new ipc measures
against public welfare

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>.54</td>
<td>-.87</td>
</tr>
<tr>
<td>1961</td>
<td>.67</td>
<td>-1.00</td>
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<tr>
<td>1962</td>
<td>-.02</td>
<td>.31</td>
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<td>1963</td>
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<td>.17</td>
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<td>-.07</td>
<td>.06</td>
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<tr>
<td>1965</td>
<td>-.42</td>
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<td>1966</td>
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<td>.02</td>
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<tr>
<td>1967</td>
<td>.21</td>
<td>-.14</td>
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<td>1968</td>
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<td>-.34</td>
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<td>1969</td>
<td>.46</td>
<td>-.64</td>
</tr>
<tr>
<td>1970</td>
<td>.27</td>
<td>-.14</td>
</tr>
<tr>
<td>1971</td>
<td>.23</td>
<td>-.12</td>
</tr>
</tbody>
</table>

policy. Table 4.27 lists the relevant R's and R^2's. In no case do the independent variables account for less than 61% of the variation in the dependent variables. The highest R^2 is .82.

The correlation coefficients (see Table 4.27) show the SES variables to be quite strong for this policy (once again, except education). Population density, for which the simple r's range from .71 to .55, is clearly the strongest variable.
<table>
<thead>
<tr>
<th>Year</th>
<th>Education</th>
<th>Income</th>
<th>Density</th>
<th>New</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>19.4%</td>
<td>35.5%</td>
<td>22.0%</td>
<td>32.0%</td>
<td>21.2%</td>
</tr>
<tr>
<td>1961</td>
<td>19.4%</td>
<td>35.5%</td>
<td>22.0%</td>
<td>32.0%</td>
<td>21.2%</td>
</tr>
<tr>
<td>1962</td>
<td>19.4%</td>
<td>35.5%</td>
<td>22.0%</td>
<td>32.0%</td>
<td>21.2%</td>
</tr>
<tr>
<td>1963</td>
<td>19.4%</td>
<td>35.5%</td>
<td>22.0%</td>
<td>32.0%</td>
<td>21.2%</td>
</tr>
<tr>
<td>1964</td>
<td>19.4%</td>
<td>35.5%</td>
<td>22.0%</td>
<td>32.0%</td>
<td>21.2%</td>
</tr>
<tr>
<td>1965</td>
<td>19.4%</td>
<td>35.5%</td>
<td>22.0%</td>
<td>32.0%</td>
<td>21.2%</td>
</tr>
</tbody>
</table>

TABLE 4.27 Correlation coefficients: all seven independent variables against all tax payments
All of these scores are significant at the .05 level. It is also worth noting that although the simple r's are high throughout, they are a bit higher in the later years. Urbanization is the next strongest variable, with industrialization doing quite well also. Although the scores for these latter two variables are high throughout, they are a bit lower in the later years, perhaps reflecting to some extent the rather high correlation between the two (.69 for both 1960 and 1970). Median family income also exhibits rather strong correlation coefficients. With the exception of education, the SES variables generally are very high. The scores for the ipc variables are somewhat mixed. While each produces a few moderately high simple r's, most of them are rather low and several are low negatives.

The more powerful beta weights presented in Table 4.28 modify the above relationships considerably. Median family income emerges as the strongest variable. The beta weights range from .91 (1971) to .38 (1969), but for the most part they are rather high. Density and urbanization produced correlation coefficients higher than those for income, but the same is not true for the beta weights. Urbanization yields a few moderately high scores, but the rest of the beta weights are low positives. The same is true for the population density variable. It is worth noting that high scores for density fall toward the end, with the reverse being the case for urbanization. It is possible
<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Density</th>
<th>Income</th>
<th>Median</th>
<th>Education</th>
<th>Urbanization</th>
<th>Industry</th>
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</thead>
<tbody>
<tr>
<td>1971</td>
<td>31</td>
<td>0.69</td>
<td>0.55</td>
<td>0.36</td>
<td>0.18</td>
<td>0.17</td>
<td>0.24</td>
<td>0.24</td>
</tr>
<tr>
<td>1972</td>
<td>31</td>
<td>0.69</td>
<td>0.55</td>
<td>0.36</td>
<td>0.18</td>
<td>0.17</td>
<td>0.24</td>
<td>0.24</td>
</tr>
<tr>
<td>1973</td>
<td>31</td>
<td>0.69</td>
<td>0.55</td>
<td>0.36</td>
<td>0.18</td>
<td>0.17</td>
<td>0.24</td>
<td>0.24</td>
</tr>
<tr>
<td>1974</td>
<td>31</td>
<td>0.69</td>
<td>0.55</td>
<td>0.36</td>
<td>0.18</td>
<td>0.17</td>
<td>0.24</td>
<td>0.24</td>
</tr>
</tbody>
</table>

Table 4.28 Beta weights: all seven independent variables against ACC payments
that the phenomenon being tapped manifests itself sometimes through one of these variables, other times through the other. Industrialization shows all negative beta weights, only a few of these being of any magnitude. Education produces positive and negative scores which are quite low.

The beta weights for the political variables do not reveal any patterns as clear as those exhibited for the SES variables. The standard measure produces the highest single beta weight obtained for any of the variables -- +1.14 in 1961. The next highest score is .55 (1960), followed by .14 (1966). Since the rest of the beta weights are with one exception (.08-1967) low negative, the high score for 1961 appears to be something of an anomaly. The new measure produces one moderately high positive and one rather high negative, but the other beta weights are quite low in both directions. When only one ipc variable at a time is run with the SES variables against the dependent variable, both the simple r's and the beta weights for the ipc variables are higher (see Tables 4.29-.31). The changes are only marginal, however, and they do not alter the position of the political variables in relation to the SES variables. It would seem that the SES variables are clearly superior to the political variables in accounting for variations in ADC payments among the states.

Once again when only the two political variables are entered in the equation, the R²'s are quite low. For all seven independent
<table>
<thead>
<tr>
<th>Year</th>
<th>Standard New</th>
<th>Income Density</th>
<th>Average Age</th>
<th>Male/Female</th>
<th>Urbanization</th>
<th>Education</th>
</tr>
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<td>1968</td>
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<td>1980</td>
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</tbody>
</table>

Table 4.29 Correlation coefficients: Standard measure and SES against ADG payments!
Table 4.32 Correlation coefficients: standard and new ipc measures against ADC payments

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
<th>R</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>.53</td>
<td>.44</td>
<td>.56</td>
<td>.32</td>
</tr>
<tr>
<td>1961</td>
<td>.40</td>
<td>.30</td>
<td>.46</td>
<td>.21</td>
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<tr>
<td>1962</td>
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<tr>
<td>1963</td>
<td>.22</td>
<td>.12</td>
<td>.30</td>
<td>.09</td>
</tr>
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<td>1964</td>
<td>.52</td>
<td>.46</td>
<td>.53</td>
<td>.28</td>
</tr>
<tr>
<td>1965</td>
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<td>1966</td>
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</tr>
<tr>
<td>1968</td>
<td>-.13</td>
<td>-.05</td>
<td>.14</td>
<td>.02</td>
</tr>
<tr>
<td>1969</td>
<td>-.16</td>
<td>-.09</td>
<td>.16</td>
<td>.03</td>
</tr>
<tr>
<td>1970</td>
<td>-.02</td>
<td>.19</td>
<td>.25</td>
<td>.06</td>
</tr>
<tr>
<td>1971</td>
<td>.07</td>
<td>.20</td>
<td>.21</td>
<td>.04</td>
</tr>
</tbody>
</table>

variables the polar figures for the R² measure were .82 and .61. For the two political variables the corresponding figures are .32 and .02, as listed in Table 4.32. The correlation coefficients are also quite low. Two of the simple r's for the standard measure are significant at the .05 level, but the rest
are very low and in both directions. The scores for the new measure are analogous, but lower—usually about .10. The beta weights (see Table 4.33) also show the standard measure to be stronger. If the direction of association is ignored for the time being (because of the reciprocal effect), it can be seen that in all but three cases the standard measure does better.

Table 4.33 Beta weights: standard and new ipc measures against ADC payments

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard ipc</th>
<th>New ipc</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>1.01</td>
<td>-.51</td>
</tr>
<tr>
<td>1961</td>
<td>.98</td>
<td>-.62</td>
</tr>
<tr>
<td>1962</td>
<td>.89</td>
<td>-.75</td>
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<td>1963</td>
<td>.71</td>
<td>-.53</td>
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<tr>
<td>1964</td>
<td>.41</td>
<td>.15</td>
</tr>
<tr>
<td>1965</td>
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<td>.41</td>
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<tr>
<td>1966</td>
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<tr>
<td>1971</td>
<td>-.10</td>
<td>.26</td>
</tr>
</tbody>
</table>
Further, the higher the score, the larger the distance between the two.

It would seem, therefore, that the SES variables generate higher levels of association than do the political variables, and of the two political variables the standard measure produces levels of association higher than those for the new measure.

The Policy Typology. The data presented in this study are not capable of providing a conclusive test of the viability of Lowi's policy typology. It will be recalled from the first chapter that the categories of the typology were organized around factors such as demand structure, decisional units, pattern of output disaggregation, etc. A quantitative analysis of the nature undertaken here is not oriented toward these kinds of distinctions. It was thought however that if, for example, SES variables (one or several) were highly associated with, say, distributive policies while political variables were highly associated with, say, redistributive policies, then the typology could serve as a useful tool in state policy research. Such a finding would not only clarify thinking about the various possible patterns of state policy-making, but also generate hypotheses for future research. It would, for instance, be a significant research enterprise to explore in depth the precise nature of the interaction between politics and welfare. Such a study would offer a great opportunity to meld quantitative
and case analyses in the examination of various policy sub-
systems. While such concerns retain their importance, the
data presented in this study do not, unfortunately, shed any
additional light on these possible linkages.

Conclusions

The four hypotheses described earlier in this chapter
should now be re-examined in terms of the data which has been
presented above. Once again the small sample size should be
emphasized, for this factor necessarily limits the confidence
with which these conclusions can be made.

It is a significant finding of this study that the SES
variables are intercorrelated to a lesser degree than might
have been expected. Taking .60 to be the "dividing line" for
the simple r's between the SES variables (a rather "weak" test),
only income and industrialization, population density and urban-
ization, and urbanization and industrialization were highly
associated with one another (1960 data). On the 1970 data, only
income and industrialization, and urbanization and industrial-
ization passed the test.

Perhaps of more significance is the fact that the ipc and
SES variables were not highly correlated. Using .50 as a test,
the standard measure for 1962 was associated with the income and
industrialization variables. No other composite standard scores
and none of the composite scores for the new ipc measure passed
this test.

The findings of this study and others of this genre must be qualified by the notion termed "incrementalism." Of thirty cases of the relationship between one year's expenditures and those of the next year, the simple r's were .9 or above in twenty-seven, .8 or above in the other three.

The data presented in this study tend to confirm the first hypothesis. Total general expenditures per capita was found to be most highly associated with median family income. This association—consistently high throughout—was stronger in the later years spanned by this study. While the standard ipc measure produced a few high beta weights, its explanatory power was rather sporadic. This same pattern is observable for education and police protection. It appears that wealth is indeed the crucial determinant for how much a state spends generally. Urbanization clearly exerted the most influence on the police protection policy (number of police per 10,000 civilian population): the more urbanized the state the more police officers are required to maintain public order. Median family income was the strongest variable on education, although its beta weights were somewhat smaller for the last four years. Population density, which showed low beta weights for 1960-1967, was the strongest variable for the last four years.

No support for the second hypothesis can be found in the data. The two redistributive policies—public welfare and ADC
payments--exhibit no noticeably stronger relationships toward the ipc variables. None of the independent variables is capable of accounting for much of the variation in public welfare. Median family income shows a few moderately high negative beta weights and industrialization three moderately high positives, but no consistent relationships were manifested. The $R^2$'s for all seven independent variables taken together for this policy were quite low. The SES variables do considerably better on ADC, but such is not the case for either political variable. Median family income here is once again the strongest variable. Urbanization shows some fairly strong positive beta weights for the earlier years, as does population density in the later years. Once again, the ipc variables are not highly associated with this (theoretically) very important policy.

The failure of the political variables on these latter two policies calls into question the Key theory. It could be that this theory, formulated by Key in the Forties and early Fifties to organize his discussion of state party politics in the South, does not apply to the contemporary politics of the American states generally. At any rate, none of the data presented in this study can be taken as support for the Key theory.24

The third hypothesis must be rejected on the basis of the

24Several scholars have claimed that the type of output measure employed in large part determines how useful an explanatory tool ipc (and other political variables) will be. That is,
relationships found. The converse of the hypothesis, however, also cannot be accepted. In the majority of the cases where one measure did better than the other, it was the standard ipc variable. The differences, though, were by no means considerable. While the new measure did not prove unmistakably superior to the standard measure, neither did the standard measure to the new one. The high intercorrelation between the two should once again be emphasized. Perhaps the only statement which can be made with much confidence in this regard is that the two are similar statistical constructs.

Two final points concerning the viability of the two measures should be noted. The simple r's between the measures were .90 and above for the earlier years spanned by this study. The two lowest correlation coefficients were for the last two points in time—.66 in 1966, and .62 in 1968. It seems that one of the variables was changing in some way. In all probability it was the new measure. The point was made previously that the election statistics showed individual races becoming more competitive in later years but not quite enough in most cases to change the party outcomes, apparently because the

ipc is an important explanatory tool when non-expenditure decisions are considered. This point was argued most forcefully by Wayne L. Francis in Legislative Issues in the Fifty States: A Comparative Analysis (Chicago: Rand McNally and Company, 1967).
minority parties had not yet had enough time to overcome rather large disadvantages. It must be emphasized that this situation was detectable only with the new measure. Such apparent trends are of enormous interest to students of state politics, and this situation would seem to commend the new ipc measure.

The last point is the most fundamental and perhaps least defensible. It was argued in the previous chapter that the older measures of ipc are implicated in a model of political parties which does not apply to the realities of American state politics, and that the new measure represents an attempt to overcome this theoretical problem. Without belaboring it, it is worth reiterating that point here.

The fourth hypothesis can be neither accepted nor rejected. The data presented in this study and/or perhaps this mode of analysis generally were not conducive to providing an important test for the Lowi typology.

The next and final chapter is an essay on the comparative study of state public policy which indicates potentially fruitful directions for future research.
CHAPTER V

THE COMPARATIVE STUDY OF STATE PUBLIC POLICY: FUTURE DIRECTIONS

Introduction

The research reported in the preceding chapter is in the tradition of the "conventional" approach to the comparative study of state public policy. It is fair to say that the present study and those analyzed in Chapter Two are significant steps toward answering the perennial question of politics: "What makes things happen?" While this framework for analysis will most likely continue to contribute fruitful explanations to the phenomenon of public choice issues, it is perhaps time to undertake a consideration of alternative paths which might be of assistance in unraveling the complexities of state policy formation. Accordingly, it is the purpose of this final chapter to reconsider the relevant literature in an attempt to focus upon the kind of research which must be undertaken if we are to achieve a clearer and fuller explanation of public policy at the state level. While there are innumerable aspects of state politics and policy which merit further research, attention is focused here on ideas which bear directly on the state policy output studies.

The Environment

Few would deny that the social arrangements extant in a society have considerable influence over the personal and political
relationships in that society. Several problems are encountered in examining this relationship, not the least of which are those of conceptualization and measurement. These issues are particularly intractable for students of comparative state policy who traditionally have attempted to capture this highly theoretical concept in a series of objective socioeconomic indicators.

It is the objective of this latter approach to select those variables which tap the significant aspects of the social structure. Sufficient care has not always been exercised, however, in specifying the precise content and boundaries of the theoretical construct to which the socioeconomic variables are addressed. Further, such terms as "social structure," "environment," "economic development," "social characteristics," etc. are often bandied about rather carelessly, but these terms are not necessarily synonymous with one another. Theoretical explanation cannot be very precise unless the terms of its discourse are unambiguous. The point is that we must strive to pin down precisely which concept we are attempting to measure, how the variables selected address themselves to that dimension, and what is the nature of the theoretical linkage which gives these efforts legitimacy in the first place. These conceptual issues are particularly important since a large body of literature attributes considerable explanatory importance to the environment--policy linkage.

In Chapter Two, studies by, for example, Young and Moreno, Hofferbert and Sharkansky, Elliott, Hofferbert, and Dye were dis-
cussed. Taken as a whole, these represent an attempt to devise new ideas and procedures for the identification and measurement of the social setting. These multi-dimensional approaches should be pursued. One rather provocative development in this regard concerns the attention now being devoted to the notion of "the quality of life" in the states and cities. While the feasibility of such undertakings is open to question, it is an example of the kind of innovating thinking required in this regard.

The Political Process

It is perhaps the institutions of state government and other aspects of the political process where the most effort should be expended in the future. It is rather ironic that in the state output studies, political scientists have not gone very far toward conceptualizing that component of the model which is their "natural" domain. This fact can be attributed to the difficulties inherent in quantifying political activity so that it can be utilized within the framework of contemporary state policy analysis. It seems that reliance upon inter-party competition data is a natural outgrowth of the inability to conceptualize and measure institutional behavior. Perhaps it is time to undertake research which might shed some

1 See for example, Quality of Life in the States (Kansas City, Kansas: Midwest Research Institute, 1972). The notion of the "quality of life" in urban settings is presently being investigated at the Center for International Studies, Emory University, Atlanta, Georgia, with the support of a Ford Foundation Grant.
light on the influence of political activity on state policy.

No claim to overcoming these problems is made here, but perhaps a few suggestions as to possibly fruitful future research considerations are in order.

The State Legislatures. There are several directions which research might take toward identifying the influence of state legislative bodies over policy choices. At a very basic level, the "professionalism" of state legislators would seem to exert some influence over policy. This variable might include factors such as, inter alia, professional backgrounds, staff assistance, compensation, and length of legislative sessions. States which are able to attract and maintain better potential candidates (professional backgrounds, and compensation), devote more time to policy consideration (longer sessions), and aid their officials in their deliberations (staff assistance), will probably be better equipped to produce more and better policy than their less favorably situated counterparts. The differences between the U. S. Congress and state legislatures on these factors are suggestive. The fact that public policy-making at all levels of government is concerned increasingly with technical and scientific considera-

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2 John Grumm and Calvin Clark have done some work in describing some different elements of the "professionalism" of various state legislators. See Compensation for Legislators in the Fifty States (Kansas City, Missouri: Citizens' Conference on State Legislatures, 1966).
tions adds further weight to the importance of professionalism. These ideas should be pursued in subsequent research with an
eye toward determining the nature of their influence on state policy choices.

Another potentially fruitful direction for further research is "role studies." It is indeed a defensible hypothesis that legislators' perceptions of things such as the proper role of interest groups in the political process, the functions and powers of legislative bodies, leadership patterns and expectations within legislative bodies, and which are the most pressing and "legitimate" political issues, will influence to some extent the

3 A substantial body of literature concerned with the inter-
play between science/technology and governmental decision-making has arisen in the last several years—particularly as it bears on the theory and practice of public administration. See, for example, Don K. Price, The Scientific Estate (New York: Mentor Books, 1970); Daniel S. Greenberg, The Politics of Pure Science (New York: New American Library, 1967); Harvey Wheeler, Democracy in a Revolu-

4 In a factor analysis of state politics, economics, and public policy Sharkansky and Hofferbert found that a "Professional-
ism/Local Reliance" factor was strongly associated with an "Indu-
ardialization" factor. The Professionalism factor included variables such as compensation of legislators, number of bills in-
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troduced, and legislative service expenditures. The Industriali-
ization factor included value added by manufacture, percentage em-
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ployed in manufacturing, and value/acre of farm land and buildings. See Ira Sharkansky and Richard L. Hofferbert, "Dimensions of State Politics, Economics, and Public Policy," American Political Science Review 63 (September, 1969). This study suggests that further explorations of the precise nature of the professionalism variable and its possible effects on subsequent policy are potential-
ly fruitful future research concerns.
activities and orientations in those bodies. The effects of these role perceptions on subsequent public policy is an especially ripe area for empirical inquiry.

Research on legislative professionalism and role perceptions toward various political objects will be of but marginal value unless it is integrated properly with behavioral analyses of state legislative activity. The value of the behavioral focus is attested to by the plethora of such research conducted on our national legislature. The thrust of this literature reveals several subtle but important patterns of activity going on within the legislature. Until similar efforts are made at the state level, many of the crucial dimensions of state legislative activity will escape students of state public policy.


6Heinz Eulau and his associates are presently conducting this type of research in the San Francisco Bay Area. Their general research focus was reported in Heinz Eulau and Robert Eyestone, "Policy Maps of City Councils and Policy Outcomes: A Developmental Analysis," American Political Science Review 62 (March, 1968). One of the major analyses emanating from this research is that of Robert Eyestone, The Threads of Public Policy: A Study in Policy Leadership (Indianapolis: The Bobbs-Merrill Company, Inc., 1971).

7This body of literature is too voluminous to report on fully. One of the better recent examples is Richard F. Fenno's Congressmen in Committees (Boston: Little, Brown and Company, 1973).
In addition to studies of the general patterns of legislative activity, considerable work is needed in the area of state legislative committees. The rich body of literature on national legislative committees has not been answered by students of state politics. Ira Sharkansky has conducted some rather interesting research which suggests possible avenues for future endeavors in this regard.8

The inter-play between the legislature and the governor's office suggests another influence on state policy. No observer of politics can deny that the conflict and discourse between these two branches exerts an important effect over the eventual shape of policy. Sharkansky has again pioneered in this area.9 The problems of measurement and data availability are formidable ones here but, once again, these problems should not deflect research from its overriding goal of providing comprehensive explanations of public choice issues.

Considerable effort has been devoted to measuring the extent of malapportionment in the states and its policy consequences.10


10See the works cited and discussed in Chapter Two.
This latter issue has been dealt with by correlating the extent of malapportionment with a series of expenditure policies. Malapportionment as a key explanatory variable typically is discounted in these studies. The hypothesis undergirding this approach is that it is the cities with their intense social problems who are most in need of governmental services. Malapportioned states will manifest a bias against the cities as evidenced in the depressive effect malapportionment will exert on the production of services. But perhaps this is not the optimum method for measuring either the extent of urban-rural cleavage or the consequences of that cleavage. The utilization of roll call analysis as an alternative method for studying this and other behavioral aspects of state politics is a potentially fruitful strategy.\textsuperscript{11}

\textsuperscript{11}Derge has done just this in his examination of 19,041 roll call votes in the Illinois and Missouri legislatures (1959-57). He found that: a) non-metropolitan legislators seldom voted together with high cohesion against metropolitan legislators; b) metropolitan legislators usually did not vote together with high cohesion; and c) metropolitan legislators were usually on the prevailing side when they did vote together with high cohesion. The major conclusion which emerged from his analysis was that party division was far more significant than the urban-rural factional cleavage in identifying voting patterns in these two states. In fact, while there was a limited amount of urban-rural conflict, there were more cases of intra-metropolitan party competition, central city--suburban conflict, and factionalism within the metropolitan majority party. See David R. Derge, "Metropolitan and Outstate Alignments in Illinois and Missouri Legislative Delegations," American Political Science Review 52 (December, 1958). It should be noted, however, that the data base in this study was all roll call votes taken in those two legislatures for the relevant time period. My hypothesis is that different patterns might have emerged had he considered only those issues which bore on the urban-rural cleavage.
For example, if one wishes to determine the extent of the urban-rural cleavage, why not study the voting patterns of representatives of each group on issues which bear on this cleavage? This approach could possibly bridge the gap between abstract measures of malapportionment and subsequent policy decisions. It would also allow for differentiation between particular policies which address themselves to the urban-rural cleavage, and functional categories of expenditures which to some extent benefit both urban and rural areas (e.g. education).

Research conducted by Duncan MacRae illustrated generally how roll call analysis might reveal some of the subtleties in legislative performance which have a bearing on subsequent policy. Examining the relationship between roll call votes and constituencies in the lower house of the Massachusetts legislature he found that representatives who came from districts most typical of their parties tended to exhibit the highest party loyalty on roll call votes, while those who came from districts atypical of their parties tended to cross party lines more often. He also found that those representatives whose previous election margins were close tended to reflect constituency characteristics in their votes more closely than did those with wider margins, which was consistent with the hypothesis that legislators with anxieties about reelection tend to be more sensitive to the wishes of the constituencies.12

12"The Relation between Roll Call Votes and Constituencies in
Two other areas of legislative activity show promise of contributing to our understanding of state policy formation; both are suggested by Wayne L. Francis. The first of these concerns the differential treatment received by various issues in the legislative arena. Francis found, for example, that different issue areas exhibited different types of legislative conflict, and these various conflict situations led to different degrees of actual and perceived success. Inter-play conflict was manifested in the areas of elections, administration, taxes, finances and social welfare. Intra-party competition occurred in areas like liquor licensing, Constitutional revision, civil rights and apportionment. There were also differences in regional conflict and pressure group conflict. In addition, Francis found that legislators developed perceptions of what the important issues were, and that they expected that some sort of legislation had to be developed to settle these issues, at least tentatively. The point here is that Francis' findings suggest that the policy model must be refined in ways which allow for consideration of some of the more subtle aspects of the policy system. The above findings also imply that different substantive issue areas exhibit different policy-making sub-structures which can only be described

the Massachusetts House of Representatives," American Political Science Review 46 (December, 1952).

by employing several models to explain activity in the various areas. More on this latter point in a later section.

Another significant finding in Francis' study concerns the notion of coalition-building. He detected three distinct party "control" arrangements in the state legislatures: those in which control of the policy-making machinery is divided, those in which one party is almost totally dominant, and those in which there is party competition although the legislature is controlled by one party. He found policy success (which Francis defined as getting laws passed) to be highest in the third group, lowest under the condition of divided party control, but also quite low in the one-party states. 14 Since these different control arrangements affect eventual policy outcomes, they must be incorporated in some way into policy models if we are to obtain clearer explanations of state policy choices.

The Executive. The literature on the executive branch of the state governments is not oriented toward a "policy focus." This is particularly unfortunate since executive establishments typically exert the predominant influence on substantive public policy. Schlesinger, Beyle and others have concentrated on the governors'

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formal powers;\textsuperscript{15} such a focus is obviously too narrow. Ransone\textsuperscript{16} has given a more detailed account of the office of the governor, but in addition to being out-dated his analysis is not readily generalizable to non-southern states. Moreover, neither approach explicitly relates its descriptions to the effects of the governors' offices on the nature of substantive public policy. McCally\textsuperscript{17} and Sharkansky\textsuperscript{18} --whose works have been discussed previously--have taken steps in that direction, but even this work must be characterized as preliminary.

Two areas of executive activity are particularly ripe for research endeavors--the influence of executive staff, and the state bureaucracies. These areas show promise due to the paucity of research on them and because of their obvious importance to state policy. The importance of the president's staff is now common knowledge.\textsuperscript{19} The increased demands being made on the president

\textsuperscript{15}These works were discussed in Chapter Two.


\textsuperscript{17}Sarah P. McCally, "The Governor and His Legislative Party," \textit{American Political Science Review} 60 (December, 1966). See the discussion of this study which is contained in Chapter Two.

\textsuperscript{18}See footnote 6.

\textsuperscript{19}Perhaps the best contemporary discussion of the consequences of the increased role of the presidential advisory system can be found in George Reedy, \textit{The Twilight of the Presidency} (New York: World Publishing Company, 1970). See also the symposium on the "American Presidency," \textit{Public Administration Review} 29 (September/October, 1969).
have given rise to the concomitant growth and importance of his advisors. It is reasonable to expect a similar phenomenon at the state level. A side effect of the rise of the administrative state has been an increased policy-making role for the bureaucracy. While considerable effort has been devoted to the federal bureaucracy, the study of the state executive has lagged behind. While there are no doubt similar forces at work on both levels, much could be gained by focusing directly on the bureaucracies of the states. A thorough consideration of both of these areas is necessary if we are to achieve more comprehensive explanations of state policy.

Political Parties. The conceptualization and measurement of party competition was the subject of the third chapter; one other point deserves mention here. This concerns the notion of party organization as an important political variable. There are at least two specific dimensions to this variable—the party in

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21 One fairly good overview of the importance of state bureaucracies is provided by Ira Sharkansky in "State Administrators in the Political Process," in Herbert Jacob and Kenneth N. Vines, eds., Politics in the American States, second edition (Boston: Little, Brown and Company, 1971). Deil Wright, based upon a survey of state administrators, has reported research which should provide a stimulus for further work in this area. Wright found, inter alia: the legislature, rather than the governor, was viewed
government, and the party vis-a-vis the public. On the party
in government dimension, Keefe suggested several areas where
inter-state differences in party organization might lead to dif-
ferential government performance. Among these were differences
in executive-legislative arrangements, party cohesion, party
principles, and different bases of constituency and group sup-
port. 22 These differences must be taken into account in policy
explanations for they will doubtless exert some impact on the
eventual product.

Samuel Eldersveld's study of party activity in Detroit sug-
gested the importance of party organization—as it relates to the
citizenry—as a political variable. Among his more significant
findings were: contact with party workers increased voter turnout
and interest, workers' perceptions of party goals influenced
their performance, intra-party communication and decisional in-
volvement (of party workers) affected performance and satisfac-
tion. 23 These findings imply that effective party organization

as the primary power-wielder over state administrators; state ad-
ministrators found the chief institutional basis of support for
their program goals in the office of the governor; the structural
insulation of portions of state government under boards and com-
misions had produced demonstrably independent attitudes among
state administrators. See his "Executive Leadership in State Ad-
mistration," Midwest Journal of Political Science 11 (February,
1967).

22William Keefe, "Comparative Study of the Role of Political
Parties in State Legislatures," Western Political Quarterly 9
(September, 1956).

23Samuel J. Eldersveld, Political Parties: A Behavioral
intervenes in the relationship between the attitudes and involvement of the people and the expectations and actions of political elites, and the consequences of these actions for subsequent policy outputs. In a sense, the effects of party organization can "socialize" political conflict and thereby alter the terms of that conflict. The impact of party organization on voter turnout and interest, however, is particularly suggestive. For any factor capable of alerting the attention of the people to the activity of the government and thereby affecting the demand structure confronting the government and the expectations of the citizens toward their government must certainly be counted as a significant political variable. The link between the people and their government is the very crux of democracy, and whatever influences that linkage is worth exploring. Hofferbert has stated: "There is strong evidence that ... mass behavior may effect elite behavior and policy directly." (emphasis added)

The possible importance of party organization as a tool which might aid us in deriving more comprehensive explanations of policy

24 An excellent discussion of the strategic premises involved in efforts to "socialize" or "privatize" political conflict is contained in E. E. Schattschneider, The Semi-Sovereign People (New York: Holt, Rinehart and Winston, 1960), especially Chapters 2 and 3.

choices\(^26\) suggests the possibility that there are several additional political factors which merit attention. The importance of "elite behavior" is a prime example.

The Importance of "Elites". Perhaps the least explored of all the factors which exert influence on state policy formation is that of elite behavior. Analyses of this notion have been confined largely to the mode of case studies. For the most part, methodological problems have inhibited the incorporation of elite studies into the larger body of comparative policy analyses. While these problems are formidable indeed, comprehensive policy explanations cannot be obtained without taking this factor into account, for at the simplest level: "Human beings have to act for there to be a 'policy'."\(^27\)

The "Dye method" of policy analysis is a fruitful path.


\(^{27}\) Ibid., p. 317.
This approach, however, has not been able to account for even one-half the variation in state expenditure patterns. Hofferbert introduced an interesting perspective on the function of these social deterministic studies:

In one sense, the aggregate studies of policy determination may be viewed as efforts to account for the "context of decision" within which policies are formulated. The benefit of studying external resources and constraints, then, is to provide a specification of the ranges and conditions within which particular and successive groups of decision makers operate. Social and political factors limit the magnitude and form of the outputs that any particular policymakers can devise and produce. 28

There is, then, a considerable "residual" of unexplained variance to which the influence of elite behavior may apply. 29


29This position is reiterated by Heinz Eulau and Robert Eyestone, op. cit. They stated: "The systematic study of public policy cannot be content with correlating indicators of environmental challenges or indicators of resource capability to policy outcomes. Rather it was our presumption that policy development is greatly influenced by the predilections, preferences, orientations and expectations of policy-makers--in short, by the political process itself." p. 143.
In addition, the study of elites may contribute to more than just the reduction in the unexplained residual. Hofferbert has argued that elite analyses are necessary ingredients in the mix of socioeconomic explanations of policy phenomena:

The study of elites is necessary not only in order to expand the amount of variance in public policy outputs for which we can account, but also in order to specify the linkages which account for the variance explained by socioeconomic factors. Thus the task which faces the student of comparative state politics is two-fold. On the one hand, we must account for the "why" of the relationships between social development and policy which have been discovered by such scholars as Dye or Dawson and Robinson. But we must also attempt to account for the variance which is left unexplained by that particular mode of inquiry. I cannot at this time offer any rigorous findings to defend the assertion, but I would propose that both of these tasks will be fulfilled to a significant extent once we are able to conduct systematic comparative studies of elites within and between states.30

Hofferbert went on to suggest how these two modes of inquiry might be merged to yield a more comprehensive style of policy analysis:

It is my argument that there are theoretical and technical guidelines in both the aggregate-state studies and in the local elite analyses which can be legitimately and fruitfully merged in the comparative study of policy processes. Without question there is a necessity for a clearer conceptualization of the role of elites in comparative state policy studies. Yet at the same time, the demonstration of the relevance of socioeconomic factors to policy patterns

suggests equally strongly that a full explication of environmental constraints and resources is essential to aid illumination of the behavior of policy making elites. Interactional analysis (a la the community studies) is insufficient without a specification of the external boundaries which define, to a greater or lesser extent, the range of possible behaviors by those doing the interacting. These boundaries are specifiable in part by means of comparative aggregate analysis. 31

Elite activity, then, is the catalytic agent in the political system. Elites are the forces which transport political demands through the various stages of the policy process. This movement, however, is particularly important at certain key points in the process. It is at these points where elite activity provides the stimulus for the movement of issue-demands from one cell in the systems model to the next. In systems' language, these inter-cell movements are termed "conversion processes."

Conversion Processes

"Conversion processes" relate to the manner by which factors such as median income and urbanization are translated into tangible policy outputs. The importance of elite behavior to this exchange was discussed above. This section concerns itself with the theoretical precision of the systems model as applied to state policy outputs, and especially with the nature of the Dye linkage for explaining policy.

Addressing themselves to this latter question, Jacob and

31 Ibid., pp. 317-18.
Lipsky indicated the "intuitive" problem with the Dye linkage:

The first problem with this operationalized model is that income, urbanization, industrialization and education are not in themselves inputs. The measures have little substantive relationship to the phenomena they are supposed to represent. We might conceive of them as environmental factors which may lead to the articulation of demands and support and their communication to political authorities. Demands are verbalizations or behavioral articulations of satisfaction or dissatisfaction with the status quo. The relationship between demand-behavior and environment may in some circumstances be high but it is certainly neither 1:1 nor constant.

Dye also leaves unexplored the nature of the linkages he asserts exist between economic development and programmatic outputs. We conclude from reading his analysis that by some magic a high level of economic development becomes transformed into high levels of expenditure. The processes by which this transformation takes place remain in the shadows although it has been the traditional task of political scientists to illuminate them. 32

Policy explanations, then, require more than the mere demonstration of high levels of statistical association. In fact, revelation of high correlation is the beginning rather than the end of the analysis. Why is, for example, median family income associated with per capita expenditures for education? How does this objective socioeconomic condition reflect itself in policy decisions, that is, what is the nature of the linkage?

Dyson and St. Angelo have conducted research which brings a new perspective to bear on this issue. Their analysis merits con-

siderable attention.

It is our position that the environmental argument essentially holds that spending politics are largely determined by a state's socioeconomic environment. If this is so, then changes in this environment should be accompanied by systematic spending changes. In any antecedent relationship, a change in the antecedent leads to a change in that which it determines. An antecedent relationship is distinguishable from a co-variation relationship. If two variables merely co-vary to a small degree, then changes in one will not be systematically followed by changes in the other. The changes would be jointly occurring only if the variables were directly linked together and the associations were strong. If the variables were not directly linked together there would be a lag between the changes in one and the changes in the other. If the association were weak only some changes in one variable would be accompanied by changes in the other variable.

It is obvious that there is a considerable difference between an argument about an antecedent relationship and an argument about a co-varying relationship. But one facet of the difference we have paid far too little attention to concerns the issue of explanation. In a determinate relationship, the antecedent explains the occurrence of the other variable. In a co-variation relationship, the explanation is not at hand. That is, whether the variables are linked directly and what factors lead them to co-vary are not known. In other words, there is coincidental occurrence, but no explanation.33

Using "difference scores" to specify the kind of relationship between environment and policy, they correlated the two sets of variables at different points in time. Their findings were indeed persuasive.

Although per capita personal income maintained a consistent relationship with policy variables there are indications of a lack of stability in the associations. The

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change in the degree of association indicates instability in the co-varying relationships. When variables co-vary differently at different points in time their connection is either spurious or controlled by an exogenous lag factor. In correlating change there was a definite dearth of correlation above .40. Thus, changes in the environment are infrequently related to changes in outputs. The unrelatedness of environmental changes and output changes indicates that the static but persistent relationship of industrialization and per capita personal income with the dependent variables is not reflecting a causal or functional relationship. Simply put, correlations like the ones discussed above merely indicate that a state's position on one dimension is occasionally too frequently congruent with that state's position on the other dimension as long as the amount of change in the variable sets is ignored.34

In the context of the present discussion of conversion processes they concluded, interestingly:

The data presented here suggest that there may be no real basis for asserting that taxing and spending policies are a function of a state's socio-economic environment. A change in the environment of less privileged states may not lead to comprehensible changes in relative levels of spending. In no case did the environment definitely account for 10 percent of the variance in spending. Hard evidence supporting the environmental-deterministic argument is unavailable. At the very least, decision making conversion and cultural milieu influence the translation of environmental changes into policies in significant ways.35

There is another, more subtle, yet similarly under-developed aspect of conversion processes which relates to the comparative study of state policy. The above discussion addressed itself to how objective environmental conditions are transformed into

34Ibid., pp. 133-34.
political demands and how these are transported throughout the political system until they eventually are reflected in policy decisions. A different question concerns the mechanisms by which some rather than other political demands are allowed entry into the political system. It is one thing to devise convincing explanations as to who exercised superior political power in given policy decisions. It is quite another task to determine which individuals and groups were dominant in setting the policy agenda. Bachrach and Baratz have argued persuasively that there is a second face of power which controls the area of "nondecisions." Their claim is that while in the search for "power" those who exercise eventual decision power are certainly powerful, there may be another group which has equal but dissimilar power. It is of course an important power consideration that a group be successful in achieving its issue demands in the political process. But a preliminary step is to get your demands placed on the political agenda in the first place. For

you cannot get your way if your demands are not even brought up. For example in the mid-sixties it was arguable that anti-civil rights forces in Congress had lost some of their power as evidenced by the passage of the Civil Rights Act of 1964 and the Voting Rights Act of the following year. Someone focusing on the other face of power might argue, however, that the anti-civil rights forces had not at all lost most of their power. And he too could point to convincing evidence—the fact that these two bills were the only two occasions in the era where civil rights was a "hot" issue in the Congress. Hofferbert made the point succinctly:

There are elaborate and intricate mechanisms for filtering issues prior to their being scheduled for consideration by legitimate policy bodies. And there may be a "mobilization of bias" in the system which prevents the articulation of particular types of issues and the interests they embody. Of the infinitude of issues which could be considered in any period of time a political system or set of systems deals with only a tiny portion. Particular elites—for whatever motivations—may be suppressing some types of issues. Or those whose interests might be served by the scheduling of particular new issues may be sufficiently "dupered" or socialized so that they do not perceive their own interests. The potential beneficiaries of a policy may not perceive the relevance of political mechanisms for the fulfillment of their needs.37

Thus if attention is directed exclusively at either face of power, only partial explanations are possible; comprehensive

policy explanations require both. At this juncture, a method for incorporating this other face of power into the comparative study of state policy is not available. Nonetheless, we must be aware of the limitations of our approach, and make some ambitious efforts toward having our theory once again conform to actual practice. Perhaps in the preliminary stages of this endeavor we might be well-served by "a circumspect return to the use of case studies." 38

**Policy Indicators**

It is perhaps in this area that there is the most latitude for imaginative endeavors by political scientists. Jacob and Lipsky pointed to some of the problems in traditional conceptualizations of "policy":

Considerable further work needs to be done in conceptualizing the dimensions of policy. Most of the analyses we have cited use measures of several dimensions indiscriminately without showing an awareness that more than one dimension is involved. Most frequently used are measures of the level of expenditure, program quality, and program impact. In addition, we can identify at least one other dimension: the distribution of benefits among a population. The distribution of benefits or sanctions is perhaps the most significant output dimension for political scientists, since most of the conflict preceding adoption of a program is not about whether it should be embarked upon but who will pay and who will benefit. Even programs that apparently benefit most of the population--such as education and highway construction--have a variable incidence of benefits.

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38 Philip B. Coulter, "Comparative Community Politics & Public Policy," *Polity* 3 (Fall, 1970).
Measures of distribution unfortunately are rarely available in public records. But the lack of data cannot deter political scientists from investigating what may be the most important dimension of policy outputs. Just as it became necessary to spend much more money to generate data about voting behavior, it is necessary to allocate resources to collect data about the distribution of program benefits.\(^{39}\)

This quote suggests the range of options open to political scientists for further conceptualizations of public policy.

Most of the policy studies have not gone beyond the employment of expenditure data as measures of public policy. It must be recalled, though, that the significant variable in this regard concerns how the political system preserves itself by providing policy which satisfies its citizens, or at least placates them so they eschew forms of political activity which might threaten the system.\(^{40}\)

What we should concern ourselves with, then, are the impacts that programs have on their target groups. Expenditure data are useful only to the extent that they can be taken as reliable indicators of impacts—which are far more difficult to define and measure. If this linkage is in fact not plausible, the use of expenditure data as output measures is not tenable.\(^{41}\)

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\(^{39}\) Jacob and Lipsky, *op. cit.*, pp. 515-16.


\(^{41}\) Although, of course, it will always be useful to know and understand why some states spend more than others for various governmental services.
correlation between expenditure and service levels throws greater suspicion on this mode of analysis, and further emphasizes the need for better policy measures.

Several of the studies discussed in Chapter Two—particularly those by Walker and Cowart—are suggestive in terms of possible policy indicators which go beyond unidimensional expenditure data. There are many other systemic outputs which cannot possibly be tapped by the use of expenditure data. The ever-growing extent of governmental regulation of various aspects of the society is but one example. Another idea was advanced by Elinor Ostrom, who has opted for the development of multiple indicators of the outputs of public agencies:

Policy analysts can fall into the trap of reliance upon single (policy) indicators. Far too many articles examining factors affecting the output of public agencies have utilized as their sole measure of output an absolute or relative input quantity such as total public expenditures or per capita public expenditures. Such methodological traps can be mitigated by conscious development and reliance on multiple indicators of policy derived wherever possible from multiple modes of data collection.

She added that the analysis of multi-dimensional output measures should go hand-in-hand with an "extensive analysis of the rela-

tionships among indicators."44

Perhaps it is useful at this juncture to reintroduce two studies which were discussed in considerably more detail in the second chapter.45 In examining several possible relationships among politics, economics and public policy, Cnudde and McCrone found a significant pattern among these variable groupings. To be more specific, they found that in some policy "sub-systems" party competition played an intervening role between economics and policy, while in others it did not. And Sharkansky and Hofferbert's factor analytical study also revealed the existence of different policy sub-systems, each with its own set of key explanatory variables. Reflecting upon this latter study, Hofferbert has stated that their analysis demonstrated:

1) the multidimensionality of political structure and policy and

2) the differential structures of determination for particular policies.46

In short, public policy is a multi-dimensional phenomenon, for to understand fully the process and content of public

44Ibid., p. 89.
policy the employment of not one but several models is necessary. This in turn invokes a discussion of several proposed policy typologies.

Policy Typologies

At several points in this chapter it has been argued that policy must be treated as a multi-faceted phenomenon, or set of phenomena. Hofferbert has succinctly stated a central reason for the construction of policy typologies:

The distribution of relative impact between sectors of the model is likely to vary between policies. We would also expect the stability and complexity of sub-structures to be different for different policies. What is clear and yet often ignored is that the process of determination differs from one set of policies to another. What constitutes a "set" of policies is still vague, but there are patterns of covariance that distinguish some programs from others.

The essential point here is that at any stage where generalizations about the policy processes are possible, we should be attuned to the likelihood of variance in the "fit" of the generalizations from one class of policy to another.

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49 Hofferbert discussed these points in "State and Community Policy Studies," op. cit., pp. 62-64. See also the discussion in Chapter One of this work.
A main function of these typologies is to design empirically constructed categories of policy derived by means of indicator covariance according to common structures of determination.\(^{50}\) Properly conceived, a policy typology indicates different patterns of relationship between policy processes and contents for various policy sub-sets. In this manner, the multi-dimensional features of policy hopefully will be revealed. Properly conceived, typologies also can help to organize and refine thinking about policy, and serve as guides to future research.

Perhaps the most noted of these typologies was proposed by Lowi. It was discussed in the first chapter and has been utilized in this research. Several others merit some attention.

Froman proposed a classificatory schema of city policies consisting of two categories -- "areal" and "segmental."\(^{51}\) Areal policies were those "affecting the total population, simultaneously, and with a single action."\(^{52}\) Segmental policies were those "affecting only a small proportion of the population, affecting different people at different times, and involving continuous programs."\(^{53}\) Drawing upon the research conducted by others on public policies in cities he found that these studies did "fit" into one or the

\(^{52}\)Ibid., p. 108.
\(^{53}\)Ibidem.
other of the categories. He then interpreted the economic and social correlates of these policies in terms of the homogeneity—heterogeneity within communities. The following two hypotheses were designed, and partially tested and confirmed:

1. Areal policies (manager-council, nonpartisan elections, annexation, intermunicipal cooperation, fluoridation, and educational services) tend to be associated with homogeneous communities (low social and economic diversity);

2. Segmental policies (urban renewal, per capita expenditures, welfare) tend to be associated with heterogeneous communities (high social and economic diversity).\(^5^4\)

Froman's approach is provocative, although it encounters some problems. First, while the typology seems to work for cities, it is questionable whether it could be applicable at the national or even state level. This criticism is not defeating, however, for a useful typology of only city policies would have considerable utility. Second, it might be argued that there are too few categories to permit differentiation among various policies. In line with this is the third problem, viz., that Froman has not detailed sufficiently the precise characteristics and implications of his categories so as to allow his schema to guide and explain our thinking about the various dimensions of policy phenomena.

Another taxonomy of public policies has been offered by Eulau and Eyestone.\(^5^5\) Like Froman, they too developed two cate-

\(^{5^4}\)Idem.
\(^{5^5}\)Eulau and Eyestone, op. cit.
gories—in this case "adaptive" and "control":

The measure used as an indicator of an adaptive policy is the percentage of total government expenses spent for health, libraries, parks and recreation. These major accounting categories used to report expenditures presumably include the major amenities offered by cities. A "high amenities" city differs from a city with a traditional services orientation in that it spends less of city income for fire and police services or public works.

The measure used to indicate a city’s control policy is the percentage of all general government expenses spent by the planning commission. General government expenses include essentially all administrative expenses and salaries not included under fire, police or recreation categories, and so on.56

Perhaps the most provocative of the several typologies is that advanced by Salisbury and Heinz.57 With Lowi, they argued that there are three fundamental types of policy—distributive, regulatory and redistributive. The three types are distinguishable primarily according to "the degree of disaggregation of the treatment the policy in question provides to those groups it affects; and that there is some sort of developmental sequence


that occurs in a technologically sophisticated system, roughly from distributive to regulatory policy. They retain Lowi's three categories and add a fourth—self-regulatory.

Their thesis is that there is a fundamental distinction to be made between decisions which allocate tangible benefits directly to persons or groups, and decisions which establish rules or structures of authority to guide future allocations. An example borrowed from Salisbury and Heinz should illustrate this distinction:

One state legislature receives the budgetary requests from the several state colleges and universities and makes the decisions about how much money each will receive. A neighboring state legislature makes a de facto delegation of authority to a state board of higher education to receive and adjust the budget requests for the state schools and ratifies the board's recommendations. In the former case the legislature makes an allocative decision, typically a highly distributive one in which each institution gets an incremental increase over its last appropriation. In the latter state, however, the legislature has, in effect, opted out of the allocation and instead chosen to make a structural, or regulatory, decision by establishing the state board.

To round out the picture, two examples of quasi-govermental bodies established through decisions which can be classified as self-regulatory are the American Bar Association and the American Medical Association. These bodies are de facto public licensing

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58 Ibid., p. 2.
59 Whether this is an addition or merely a sub-division of another category is an issue which need not detain us here.
60 Ibid., p. 4.
bodies since they determine standards for admission and retention in their respective professions, design and administer the relevant entrance examinations, etc.

Salisbury and Heinz's organizing concept is "integration," and their two crucial variables are the integration/fragmentation of the demand system and of the decision-making structure. Any decisional system must achieve some degree of integration to make any decision. The question is not the amount of integration achieved but rather how difficult or costly it is to achieve the requisite coalition. The more costly it is to organize decisional coalitions the more fragmented we may regard the decisional unit regardless of how often it achieves a coalition. There are three crucial elements which enter into the cost-benefit calculations of decision-makers: first, the value, positive and negative, to the decision-maker of acting so as to confer benefits upon some relevant constituency; second, the costs of informing himself about the issue sufficiently to develop a position, and; third, the costs of investing time, energy and resources in negotiating a favorable winning coalition. The degree of fragmentation of the demand system will of course exert considerable influence on this cost-benefit calculus. From these considerations emerged their central hypothesis:

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61 See ibid., pp. 3-4.
The more costly it is to organize the requisite coalition on an issue, the more likely it is that the policy outcome will be structural rather than allocative.\(^{62}\)

The hypothesis is illustrated graphically below: \(^{63}\)

<table>
<thead>
<tr>
<th>Decision-making Structure</th>
<th>Integrated</th>
<th>Fragmented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated</td>
<td>Redistributive</td>
<td>Self-Regulatory</td>
</tr>
<tr>
<td>Fragmented</td>
<td>Regulatory</td>
<td>Distributive</td>
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</tbody>
</table>

The above discussion has, hopefully, indicated some of the potential of policy typologies. At this point that of Salisbury and Heinz shows the most promise, mostly because of their creativity in devising the categories and their detailed explanation of the conceptualization and implications of the schema. The task now falls to public policy analysts to test these typologies against real world referents.

**Methodological Caveats**

The major methodological problems extant in the state policy

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\(^{62}\)Ibid., p. 4.

\(^{63}\)See ibid., p. 8.
studies have been discussed in the context of the relevant literature at various points in this report. Two additional ones merit some attention.

The more serious of these concerns "the assumption of linearity in complex statistical relationships." The output studies typically have relied upon multiple regression and/or correlation programs. As employed, there is a tacit assumption of linearity in the relationships studies. But this assumption is arbitrary, for there are no a priori reasons why these relationships could not be assumed to be non-linear. This criticism becomes particularly severe when applied to analyses of data for different points in time. This is all the more discouraging in light of Hofferbert's finding that the connection between "ecological development" and policy has been altered considerably over the past several decades.

It is an eminently plausible hypothesis that there are several dimensions contained within the data of the policy studies. These dimensions cannot be deciphered without the assistance of an informed and imaginative methodology. At the very least, tests for "curvilinearity" might be performed. Cur-

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64 This phrase was taken from Coulter, op. cit., who provided a more detailed discussion of this idea.
vilinear relationships cannot be discovered unless curvilinear programs are employed. This would be a very simple undertaking—a matter of merely punching a few different operations cards. If one expects (assumes) linear relationships and uses only linear programs, then the results of the computer operations will indicate the apparent degree of linearity in the relationship.

The other point concerns the conceptualization, measurement, and implications of the notion of "feedback." Somehow, relevant information concerning the consequences of political system decisions is transmitted to those who have political authority. This information will bear on the character of future inputs.66 But by what mechanisms is this accomplished? It is time that the notion of feedback be assigned an importance which transcends its inclusion in the model merely to make that model more elaborate.67 It has always been assumed that feedback exists, but relatively little attention has been devoted to studying its operation. Perhaps more serious future consideration of elite activity and conversion processes will have a spill-over effect on the study of the feedback loop. Pursuant to this task, it is perhaps time to consider briefly an alternate approach to the

66 See Easton, op. cit., pp. 127-29, for a more detailed discussion of the notion of "feedback."
An Alternate Approach to the Study of Public Policy

There are several paths which the study of public policy might traverse fruitfully. It is perhaps appropriate to close this work with a brief discussion of one of these ideas.

The area which seems to hold the most potential concerns the notion of alternate models or paradigms of the policy process. The research reported above is an example of one policy analytic frame of reference—systems analysis. In a rather innovating work Dye presented six models of the policy process. He argued persuasively that different models apply to different policy "events," and, therefore, the choice of the appropriate model is necessary for accurate explanations of policy phenomena. In addition to the systems model the others he discussed were: the elite model, pluralist model, rational model, incremental

69 See, for example, Stephen K. Bailey, The Office of Education and the Education Act of 1965, Inter-University Case Program (100) Indianapolis: Bobbs-Merrill Company, Inc.).
model, and the institutional model. More detailed explanations and examples of the models applied to real world referents are listed in the footnotes as indicated above.

Dye's ideas are well-taken. His arguments can be taken a step further. Allison argued that the only method by which we can achieve comprehensive explanations of policy issues is by employing different models simultaneously. In explaining "what happened" in the Cuban Missile Crisis of 1962 Allison utilized three models--rational actor, organizational process, and bureaucratic politics. He found that each model provided a coherent, plausible, yet different explanation than did its counterparts. This led him to claim that no one model produces "the correct" explanation but rather each is influenced in its explanation by the particular conceptual lens which the model imposes upon the analysis. He concluded:

Such variance among interpretations demonstrates each model's tendency to produce different answers

73 See, for example, Allan P. Sindler, ed., Policy and Politics in America (Boston: Little, Brown and Company, 1973).
to the same question. But as we observe the models at work, what is equally striking are the differences in the ways the analysts conceive of the problem, shape the puzzle, unpack the summary questions, and pick up the pieces of the world in search of an answer.

Spectacles magnify one set of factors rather than another and thus not only lead analysts to produce different explanations of problems that appear, in their summary questions, to be the same, but also influence the character of the analyst's puzzle, the evidence he assumes to be relevant, the concepts he uses in examining the evidence, and what he takes to be an explanation. None of our three analysts would deny that during the Cuban Missile Crisis several million people were performing actions relevant to the event. But in offering his explanation, each analyst attempts to emphasize what is relevant and important, and different conceptual lenses lead analysts to different judgments about what is relevant and important.75

It is important, therefore, that the policy analyst not allow himself to be "locked into" any particular paradigm. Rather, he must utilize several different models to study the same problem and thereby synthesize the (necessarily) partial explanations of each model into a more comprehensive policy analysis.76 The precise contours of such an enterprise must, for now, be left for future research, although Allison has certainly indicated

75Ibid., pp. 249 and 251.
76Theoretical treatments of these ideas can be found in William E. Connolly, "Theoretical Self-Consciousness," Polity 6 (Fall, 1973), and Connolly, Political Science and Ideology (New York: Atherton Press, 1966). These arguments are illustrated in a coherent package of readings edited by Connolly and
the general directions these endeavors might follow. These
issues await our attention, and perhaps not until we tackle
them will we be able to provide answers to that perennial
question of politics: "What makes things happen?"

Glen Gordon, Social Structure and Political Theory (Lexington,
Massachusetts: D.C. Heath and Company, 1974). All of these
works draw heavily on the notion of the "perspective" developed
by Karl Mannheim in Ideology and Utopia (New York: Harcourt,
Brace & World, 1936). For an interesting analysis of these ideas
as applied to the natural sciences see Thomas S. Kuhn, The
Structure of Scientific Revolutions (Chicago: University of
## VARIABLE LIST

### Legend

- **T** = Total general expenditures per capita
- **P** = Police protection
- **E** = Per pupil expenditures, education
- **W** = Public welfare expenditures, per capita
- **A** = ADC payments
- **CP** = U.S. Census of Population
- **SA** = U.S. Statistical Abstract
- **ES** = Official State Election Statistics
- **BS** = Book of the States

### Variable List

<table>
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<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Variable Source</th>
</tr>
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</tr>
<tr>
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<td>Variable Description</td>
<td>Variable Source</td>
</tr>
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<tr>
<td>21</td>
<td>T., 1963</td>
<td>SA: 1965, p. 430</td>
</tr>
<tr>
<td>23</td>
<td>E., 1963</td>
<td>SA: 1964, p. 124</td>
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<td>24</td>
<td>W., 1963</td>
<td>SA: 1965, p. 430</td>
</tr>
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<td>SA: 1965, p. 105</td>
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<td>W., 1965</td>
<td>SA: 1966, p. 427</td>
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<td>E., 1966</td>
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<td>New, composite</td>
<td>Composite, 1958-68</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION CONCERNING DATA**

(1) **Blank spaces**

(a) data were not available for the 1958 legislative elections in Colorado.

(b) no legislative elections were held in Connecticut in 1964.

(c) no elections for state offices were held in Hawaii in the years between 1958 and 1962. Data for 1959 were put in 1958 spaces.

(d) In Illinois, elections for the lower house in 1964 were held on an at-large basis because the legislature was not able to agree on a new re-apportionment scheme in time for the election.

(e) no elections for the upper house were held in 1968.

(f) no elections for the upper house of the Kansas legislature were held in 1958, 1962, and 1966.

(g) Nevada's official election statistics for 1958 did not indicate the partisan affiliations of the candidates, so the new measure of inter-party competition could not be determined for that state for that year.

(h) no elections for the upper house in New Jersey were held in 1969.
(2) For the following states, there were no gubernatorial elections in 1958; 1956 data were used instead:

Illinois
Indiana
Missouri
West Virginia

(3) For the following states gubernatorial data for 1956 was used for the 1958 spaces, 1960 for 1962, 1964 for 1966:

Illinois
Indiana
West Virginia

(4) For the following states, gubernatorial data for 1958 was used for 1960 spaces as well, 1962 for 1964, 1966 for 1968:

Alaska
California
Colorado
Connecticut
Hawaii
Massachusetts (in this case only 66 for 68; previous gubernatorial elections were held every 2 years).

Nevada
New Jersey (political data adjusted since New Jersey holds state elections on odd-numbered years. The output data was also adjusted to take this into account).

New York
Wyoming

(5) In New York in 1966 and Wyoming in 1958 neither of the winning candidates received a majority. Therefore, the competition scores for the governorship for those years are based upon only the percentages of the two-party vote, rather than on the percentages of the total vote.
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